

# PROJECT COORDINATOR'S REPORT

अखिल भारतीय बकरी सुधार समन्वित शोध परियोजना

ALL INDIA COORDINATED RESEARCH PROJECT ON GOAT IMPROVEMENT

2018-2019



भा.कृ.अ.प - केन्द्रीय बकरी अनुसंधान संस्थान, मखदूम फरह, मथुरा उ०प्र०

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# 1. INTRODUCTION

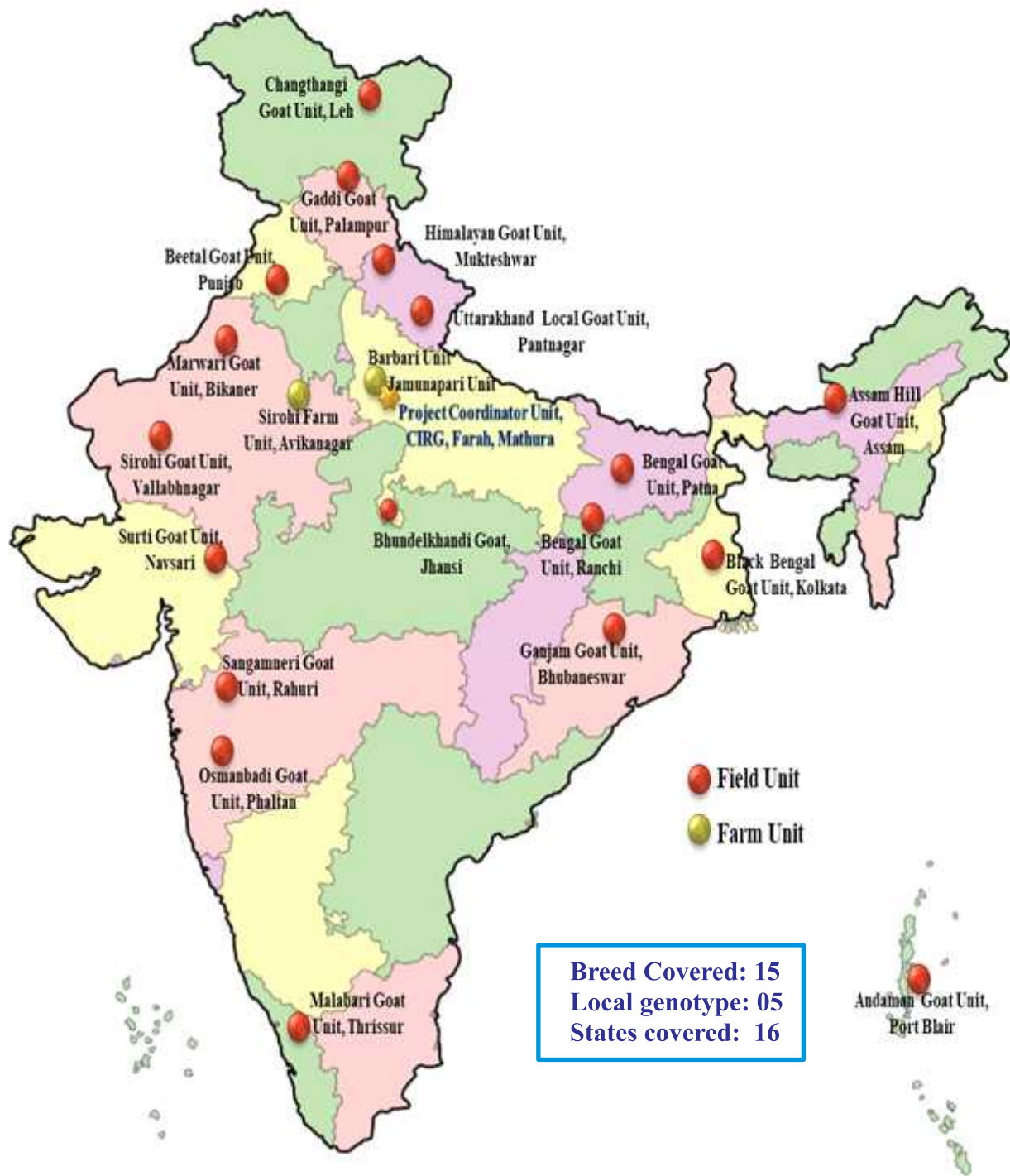
All India Coordinated Research Project (AICRP) on Goat Improvement is designed to enhance the productivity of the goat genetic resources in their natural habitat. The project will enhance the genetic potential of the individual as well as conservation of the population in their natural habitat. Presently, AICRP on goat improvement is working with 15 registered goat breeds and five 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.

The details of field and farm units of AICRP on Goat Improvement are presented below

**Table 1: Coordinating Centers of AICRP on Goat Improvement**

S.N.	Centre	Location	TSP/NEH	Purpose
<b>A) Field Units</b>				
1.	Andaman Goat Field Unit	ICAR- CIARI, Port Blair, A & N Island	Island Region	Meat
2.	Assam Hill Goat Field Unit	AAU, Khanpara, Guwahati, Assam	<i>NEH</i>	Meat
3.	Bengal Goat Field Unit	BAU, Kanke, Ranchi, Jharkhand	<i>Partially TSP</i>	Meat
4.	Black Bengal Goat Field Unit	WBUV and FS, Kolkata, West Bengal	<i>Partially TSP</i>	Meat
5.	Changthangi Goat Field Unit	SKUAST, Kashmir, Leh-Ladakh, J&K	<i>Partially TSP</i>	Fibre & Meat
6.	Gaddi Goat Field Unit	HPKVV, Palampur, Himachal Pradesh	<i>Partially TSP</i>	Meat & Fibre
7.	Ganjam Goat Field Unit	OUAT, Bhubaneswar, Odisha	<i>Partially TSP</i>	Meat
8.	Himalayan Local Goat Field Unit	ICAR-IVRI Campus, Mukteshwar, Uttarakhand		Meat
9.	Malabari Goat Field Unit	KV&ASU Mannuthy, Thrissur, Kerala	<i>Partially TSP</i>	Meat & Milk
10.	Marwari Goat Field Unit	RAJUVAS, Bikaner, Rajasthan		Meat
11.	Osmanabadi Goat Field Unit	NARI, Phaltan, Maharashtra,		Meat & Milk
12.	Sangamneri Goat Field Unit	MPKV, Rahuri , Maharashtra		Meat & Milk
13.	Sirohi Goat Field Unit	RAJUVAS, College of veterinary sciences & AH Vallabhagar , Rajasthan	<i>Partially TSP</i>	Meat & Milk
14.	Surti Goat Field Unit	N.A.U., Navsari, Gujarat	<i>Partially TSP</i>	Milk & Meat
15.	Uttarakhand Local Goat Field Unit	GBPUA&T, Pantnagar, Uttarakhand		Meat
16.	Bengal Goat field Unit	ICAR-RCER, Patna (New Centre)	<i>Partially TSP</i>	Meat
17.	Bundelkhandi Goat Field Unit	IGFRI, Jhansi (New Centre)		Meat
18.	Beetal Goat Field Unit	GADVASU, Ludhiana, Punjab (New Centre)		Milk & Meat
<b>B) Farm Units</b>				
1.	Barbari Goat Farm Unit	ICAR-CIRG, Makhdoom, Uttar Pradesh		Milk & Meat
2.	Jamunapari Goat Farm Unit	ICAR-CIRG, Makhdoom, Uttar Pradesh		Milk & Meat
3.	Sirohi Goat Farm Unit	ICAR-CSWRI, Avikanagar, Rajasthan		Milk & Meat
<b>C) Project Coordinating Unit</b>				
1.	Project Coordinator Unit	ICAR-CIRG, Makhdoom, Uttar Pradesh		

Nine units are working as partially TSP unit under Tribal sub plan fund of the project. Assam hill goat unit is also operational in NEH region. AICRP is operational at Leh-Ladakh region of Jammu & Kashmir for conducting research on goats producing Pashmina in temperate climate; similarly, we are also working in Andaman & Nicobar Island. The major thrust of the project is to build up long term capacities of goat keepers through introduction of superior breed bucks, technology transfer, creation of knowledge base, application of health management practices for enhancing production potentials on sustainable basis.



***Distribution of 21 AICRP (G) units in different agroclimatic conditions***



## **1.1. OBJECTIVES AND ACTIVITIES OF THE AICRP ON GOAT IMPROVEMENT**

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 centers 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.

### **TECHNICAL PROGRAMME (2017-2020)**

#### **ACTIVITIES (2017-2018)**

1. The unit will maintain at least five Cluster/centers having at least 100 breedable does under the coverage and the total breedable doe 500 will be covered by each unit.
2. Production system characterization will be undertaken which will include information on production and management practices, population trends, feeding system, disease pattern and socio-economic condition.
3. Body weights from birth to 12 month of age at 3 months interval will be recorded. Milk yield recorded 15 days interval up to 90 days and lactation length. Similarly pashmina fiber recording will be carried till 18 month of age.
4. Each Unit will survey, identify and map the breeding tract of the respective breed and collect baseline data of cluster.
5. For first stage selection, male kids born from genetically superior does will be identified at weaning (3 month of age). Each year fifty selected kids will be purchased for future buck production and will be preferably reared till the age of final selection either with the help of few progressive farmers of the adopted area on cost /benefit sharing basis or at AICRP Unit. AICRP centers will have to evolve suitable mechanism to rear such kids till the age of final selection
6. For Second stage selection of males and females will be made on the basis of 6/9 month body weight and type birth (triplets and twins). For milk yield 90 days milk of the dam be considered for selection criteria.
7. The bucks required for distribution in adopted areas will be given on a minimal book value to registered farmers while others can be sold to other agencies involved in goat

improvement for breed improvement. After two to three breeding seasons, bucks will be either rotated amongst clusters to avoid inbreeding or sold outside of adopted area for breed improvement.

8. Semen of few selected bucks from each collaborating unit will be collected and preserved by establishing semen banks. Preferably in collaboration with semen bank available at university/NBAGR, Karnal
9. The improvement of body weight, milk yield and reproductive performances of the progeny will be estimated over the years/generation
10. Awareness programme, Gosthi meeting and training programmes will be conducted.
11. Improvement of body weight and milk yield by 1% per generation in village flocks.
12. Capacity Building of community goat keepers (approx. 200 per year) with exposure visit (5 per year).
13. The animals for performance studies would be selected from farmer's flock under existing transhumance (migratory) system. For this, about 450 animals from three centers/migratory routes in different areas from different flocks would be selected and reared under existing management system in collaboration with the farmers. (Gaddi, Changthangi, Ganjam only)
14. Based on disease profile, units will prepare Annual Prophylactic Health Calendar to prevent morbidity and mortality. Necessary vaccines/drugs will be purchased from project fund.
15. Efforts will be made to form goat breeder/cooperative societies/ self-help groups.
16. Identification of animal and providing insurance cover to females above six months
17. Documentation on price trend for live goats and goat products viz. meat, milk, skin, hair and manure and preference of consumers
18. Deworming of goats is to be generally carried out at the end of the monsoon. The FAMACHA method need to be standardized in their environment to assess the degree of anemia and only those animals with scores  $>3$  should be dewormed. Additionally, the dewormer should be changed every year to avoid development of anthelmintic resistance.
19. The selected breeding bucks should be provided to buck keeper with agreements the buck keepers to ensure that the bucks are looked after well. The maintenance charges of bucks should be recovered by charging a fee for buck service. The bucks should be insured.
20. Exchange of breeding males across clusters and villages should be carried out.
21. Organize animal competitions with wide publicity to identify outstanding animals from a larger area. A competition to be held to identify superior male and female by organizing a competition with suitable prize.
22. Record and discuss selection criteria / practices followed by farmers/ buck owners.
23. Organization of workshop in goat production, value addition, marketing and other related activities for all stakeholders.
24. Complete feed development may be demonstrated to farmers basing on local feed fodder resources.

### ACTIVITIES (2018-19)

1. All the above activities will be continued.
2. Precision on data recording.
3. Semen repository of elite male and female.
4. DNA repository of improved male (50) & female (50). (DNA isolation will be carried out by CIRG after collecting samples from each unit and DNA repository bank will be established at PC Unit)
5. Milk casein genotyping of improved bucks and high yielding females. (Genotyping will be carried out by CIRG after collecting samples from each unit)

### ACTIVITIES (2019-20)

1. All the above activities will be continued.
2. Develop a model farmer demonstration unit in each cluster.
3. Create a data base of owners of superior animals and make it available to relevant State Govt. authorities so that they can purchase bucks from them on preference for distribution under government schemes.
4. Efforts will be made to form goat breeder's society's cooperative societies and to register the goat flocks in the breeding tract of the respective breeds.
5. Establishment of market linkages with help of NGOs.

### Deliverables of the Project (2017-2020)

Measurable Activities	2017-18	2018-19	2019-20
Selection of clusters & farmers and Registration of adult doe ( <b>No. of animals</b> )	28000	28500	29000
Animal Identification, pedigree and performance recording ( <b>No. of animals</b> )	15500	16500	17500
Selection of male kids and distribution for breeding purpose ( <b>No. of animals</b> )	300	320	350
Health Coverage with vaccination and deworming etc. ( <b>No. of animals</b> )	30000	32000	34000
Capacity building of goat keepers and stake holders ( <b>No. of trainings</b> )	60	65	68
Semen doses cryo-preserved for <i>in situ</i> / <i>ex situ</i> conservation of important breeds (No.)	1500	1600	1700

## 1.2 ACTION TAKEN REPORT

Proceeding of the 18th Annual Review Meet (ARM) of AICRP on Goat Improvement held at CSK-Himachal Pradesh Krishi Vishva Vidyalaya Kangra, Palampur (HP) during 20-21 June, 2018.

S. No	Recommendations	Action Taken (Please quantify your Details)
1	It is necessary to develop a template for different publications and make it uniform for all the units. Similarly details of technology development and technical specifications should be reported in a uniform format.	<ul style="list-style-type: none"> <li>❖ Guidelines and template for folder, success story and breed status paper were provided to all the units during December, 2018.</li> <li>❖ Folder received from 14 units.</li> <li>❖ Success story from- Changthangi Goat Field Unit, Leh-Ladakh, J &amp;K</li> </ul>
2	Milk nutrient profiling including mineral content of all the breeds should be carried out in collaboration with CIRG.	Milk samples for evaluation obtained from Gaddi, Surti, Black Bengal, Sangamneri, Osmanabadi, Himalayan Marwari and Pantja Goat breeds
3	GMIS software database needs to be maintained in collaboration with IASRI, New Delhi and one IT-I professional may be deployed at IASRI for database maintenance, upgradation, and data analysis.	Dr. Md. Islam, IASRI, Library Avenue, Pusa, New Delhi working as Co-PI to work in the project.
4	It has been suggested by the Hon'ble DDG that a brain storming session on future genetic improvement and profitable goat farming may be organised by the PC goat unit at CIRG. The eminent scientist/ faculty in this area of research may be invited.	The brain storming session will be held during November, 2019.
5	Beetal breed of goat, a very important breed, need to be improved and conserved. It has been decided that the Beetal breed Centre at GADVASU may be included, initially as non-funding Centre of AICRP-G.	This has been approved as new unit for implementation of technical programme and funding will be finalized during next plan budget.
6	The Black Bengal breed Centre at IVRI, Kolkata may also be included as non-funding Centre.	This has been approved as non-funding unit.

7	Since the PC unit has to do lot of compilation of data and through monitoring, Dr. M.K. Singh, Principal Scientist (Animal Genetics and Breeding) may be included in PC- Unit team.	Included as a team member to work in the PC unit for the effective implementation of technical programme of AICRP on goat improvement (26.10.2018)
8	It is necessary to quantify the effect of technological intervention & how much each intervention is contributing towards income generation and sustainable goat production. The required expertise from the concerned ICAR institute may be taken in this regard.	All the units have been told to partition the income generation at farmer's flock. A meeting will be held with experts to determine the same.
9	Standard operating procedure (SOP) for data recording on growth and milk yield should be finalized at the earliest.	SOP for milk yield and growth prepared.
10	The DNA sample from high yielding animals as well as sire families should be collected as a DNA repository in PC unit.	<ul style="list-style-type: none"> <li>❖ Blood sample of improved male and females will be sent to PC unit.</li> <li>❖ We have obtained some samples and will be stored at CIRG.</li> </ul>
11	It is necessary to estimate genetic gain over the years and flock productivity. Moreover, estimation of genetic parameters and selection differential should be carried out.	This will be reported by each units and genetic parameter also estimated and reported regularly.
12	Baseline data and production system characterisation should be carried out effectively and requisite number of bucks with breeding values should be maintained by each unit.	<ul style="list-style-type: none"> <li>❖ Baseline data format circulated to all the units.</li> <li>❖ All the units are working in this direction.</li> </ul>
13	A refresher programme for all the principal investigators as well as other staffs of the unit should be organized regularly. Mid-term evaluation need to be carried out by PC Unit to monitor the progress.	<p>Six monthly performance evaluation and sensitization meeting for 9 field units were organized during 11-12 December, 2018.</p> <p style="text-align: center;"><b>Units presented their progress report</b></p> <ul style="list-style-type: none"> <li>❖ Uttarakhand Local Goat Field Unit, GBPUA&amp;T, Pantnagar,</li> <li>❖ Black Bengal Field Unit, Ranchi,</li> <li>❖ Himalayan Local Goats Field Unit, IVRI, Mukteshwar</li> <li>❖ Bundelkhandi Goat Field Unit, IGFRI Jhansi.</li> <li>❖ Bengal Goat Field Unit, Patna,</li> <li>❖ Ganjam Field Unit, Bhubaneswar,</li> <li>❖ Marwari Goat Field Unit, Bikaner,</li> </ul>

		<ul style="list-style-type: none"> <li>❖ Surti Goat Field Unit, Navsari,</li> <li>❖ Beetal Goat Unit, GADVASU, Ludhiana, Punjab.</li> </ul>
14	Manpower pattern should be uniform in all the units and at least one data enumerator for one village on contractual basis should be appointed. The remuneration for enumerator will be Rs. 10,000/-per month or rate fixed by respective state government, whichever is higher.	Data enumerator is allowed for each unit as per requirement.
15	Reporting to PC Unit should be carried out regularly within the time frame. Soft as well as hard copy of published research papers, patent information and product details should be provided by each unit to PC Unit at CIRG.	<p>Research publications/paper obtained from:</p> <ul style="list-style-type: none"> <li>❖ Black Bengal Goat Field unit, Kolkata, West Bengal.</li> <li>❖ Bengal Goat Field unit, Ranchi, Jharkhand.</li> <li>❖ Sirohi Goat Field Unit, Vallabh Nagar, Rajasthan.</li> <li>❖ Uttarakhand Local Goat Field Unit, Pantnagar, Uttarakhand.</li> </ul>
16	All the units need to publish more research paper in peer reviewed journals with high impact IF and should work towards technology development to provide solution to the problems of farmers in specific agro-ecological conditions.	<ul style="list-style-type: none"> <li>❖ It has been discussed again with all the units.</li> <li>❖ Email sent regarding publish paper in high impact factor on 25.10.2018.</li> </ul>
17	Standardized region specific preventive health schedule and vaccination schedule should be developed by each unit and reported to PC unit for regular follow-up.	<p>Email sent for submission of preventive health schedule and vaccination camp on 25.10.2018. It has been discussed and all the centres were requested to submit the same.</p> <p style="text-align: center;"><b><u>Units submitted details:</u></b></p> <ul style="list-style-type: none"> <li>❖ Black Bengal Goat Field unit, Kolkata, West Bengal.</li> <li>❖ Bengal Goat Field unit, Ranchi, Jharkhand.</li> <li>❖ Uttarakhand Local Goat Field Unit, Pantnagar, Uttarakhand.</li> <li>❖ Osmanabadi Goat Field Unit, Phaltan, Maharashtra.</li> </ul>
18	AUC should be submitted by each unit by the June 30 of every year.	<b>AUC received from-</b> Andaman Goat Field Unit, Assam Hill Goat Field Unit, Black Bengal Goat Field Unit, Kolkata, Himalayan Local Goat Field Unit, Osmanabadi Goat Field Unit Sirohi Goat

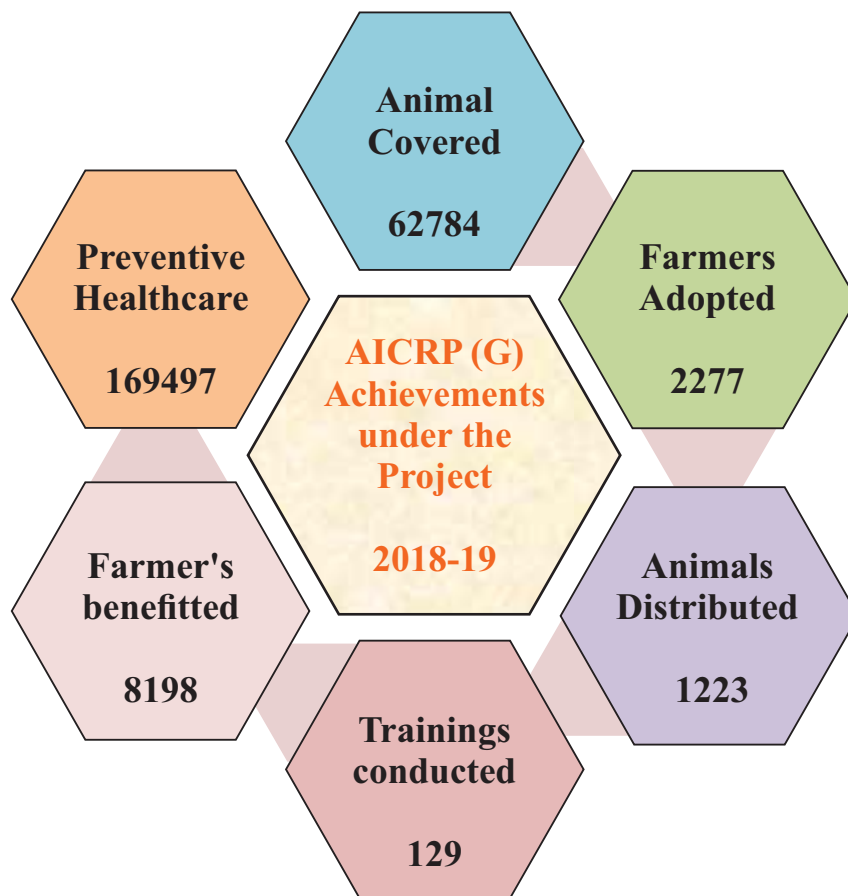
		Field Unit, Avikanagar, Surti Goat Field Unit, Navsari, Bundelkhandi Goat Field Unit, Bengal Goat Field Unit, Patna, Malabari Goat Field Unit, Marwari Goat Field Unit, Sangamneri Goat Field Unit, Sirohi Goat Field Unit, Vallabhnagar, Gaddi Goat Field Unit and Ganjam Goat Field Unit.
19	Kisan Kalyan Abhiyan should be taken of in the tribal villages as per guideline of Council and TSP report should be reported separately by all the units.	<p>TSP report format circulated to all the units on 10.10.2018</p> <p><b>Kisan Kalyan Abhiyan under TSP programme:</b></p> <ul style="list-style-type: none"> <li>❖ Muniguda-Raygada (district), Odisha (During 18.06.2018-19.06.2018)</li> <li>❖ Kandhamal/Rayagada (Odisha) (During 9.12.2018-10.12.2018)</li> <li>❖ Jirabadi, Odisha (During 26.02.2019)</li> <li>❖ Kalahandi Bhubaneshwar (Odisha) (During 28.02.2019 to 02.03.2019) <ul style="list-style-type: none"> <li>➤ Farmers' awareness programme on scientific goat farming organized by Gopal Biotech Agro Farm, Kendupali, Bargarh.</li> <li>➤ Vaccination camp at Badakhairmal (During 28.02.2019)</li> <li>➤ Improvement programme on Ganjam goat (During 01.03.2019)</li> </ul> </li> <li>❖ Deoghar (district), Santhal Pargana (During 27.10.2018 – 28.10.2018)</li> <li>❖ Purola (district), Uttrakhand (During 10.03.2019 – 11.03.2019)</li> <li>❖ Agali, Attapaddy, Kerala (During 26.02.2019 – 27.02.2019)</li> <li>❖ Greswar, Baksa, Assam (During 13.03.2019 - 14.03.2019)</li> <li>❖ Palojori Block, Village- Jaynagra and Gaddi of Deoghar District, Ranchi Jharkhand (During 11.02.2019 – 13.02.2019)</li> <li>❖ Gadchiroli, Maharashtra (During 1.03.2019- 2.03.2019)</li> <li>❖ Dhadgaon, Nandurbar, Maharashtra (During 26.09.2018- 27.09.2018)</li> </ul>
20	The units should refund the unspent amount well in advance before February of each year, so that same will be refunded back to council.	This has been communicated to all the units

21	All the centres should send the farmers and other project workers for exposure visit to ICAR-CIRG.	<p>Email sent to all the units regarding send farmers and others project workers for exposure visit to CIRG, Mathura.</p> <p style="text-align: center;"><b>Farmers visited to CIRG:</b></p> <ul style="list-style-type: none"> <li>❖ Assam Hill Goat Field Unit: A group of 16 farmers with one technical officer visited CIRG during 23.02.2018 to 28.02.2019.</li> <li>❖ Black Bengal Goat Field unit, Kolkata, West Bengal- 10 project personnel visited CIRG during 8.02.2019 to 9.02.2019.</li> <li>❖ Gaddi goat field unit, Palampur- 8 farmers and 1 faculty member visited CIRG during 4.04.2019 t 7.04.2019.</li> <li>❖ Sirohi goat field unit- 20 members (farmers+ field staff) visited CIRG during 12.03.2019- 14.03.2019.</li> <li>❖ Ganjam goat field unit- 8 trainees of Bhubaneshwar visited CIRG on 12.03.2019.</li> </ul>
22	A common template for making power point presentations should be developed and circulated to all centres latest by September 30, 2018.	<ul style="list-style-type: none"> <li>❖ Data file for the presentation in Annual Review meet circulated to all the units on 12.11.2018.</li> <li>❖ Revised presentation format was circulated to all the units on 15.12.2018.</li> </ul>
23	All the units of AICRP-G must work as per the assigned technical programme.	All the units are provided the technical programme and necessary formats to carry out the work.






















- xii. Working in more than 35 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.
- xiii. Technological interventions under the project have benefited more than 2277 goat rearing families in different units over sixteen 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 achievement in number during 2018-19**

## 1.4 DETAILS OF FARMER CENTRIC DISTRIBUTION

Units	Products																
																	
	Led Torch	Shoes	Mosquito net	Water Bottle/ Solution Bottle	Umbrella	Feeding bottle	Mineral Mixture (Kg)	Herbal Tickicide	Fodder cutting machine	Feeder	Bags/Compound Feed Bags/Lime Feed Bag	Tarpaulin	weighing balance	Measuring Tape	Fodder Plant	Fodder Seed	Thermometer
Andaman Local Goat Unit	0	0	0	0	0	0	2938	470	0	0	0	25	0	0	0	0	0
Assam Hill Goat Unit	50	25	0	346	25	50	346 packets	346	0	75	5	0	0	50	0	0	0
Bengal Goat Unit, Ranchi	0	0	0	10	0	0	0	0	10	0	0	0	0	0	0	0	0
Bengal Goat Unit, Kolkata	180	0	0	180	0	0	158.4	0	0	79	0	0	0	0	0	0	0
Bengal Goat Unit, Patna	0	0	0	0	0	0	100	0	0	0	0	0	18	0	300	0	0
Beetal goat Unit, Punjab	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bundelkhandi Goat Unit, Jhansi	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Changthangi Goat Unit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gaddi Goat Unit	0	0	0	0	0	0	400	0	0	0	40	0	0	0	0	0	0
Ganjam Goat Unit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Himalayan Local Goat Unit	0	0	0	0	0	0	90	0	0	0	0	0	4	8	0	0	80
Malabari Goat Unit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Marwari Goat Unit	0	53	0	12	12	0	97	0	0	0	0	0	0	60	0	0	0
Osmanabadi Goat Unit	0	0	0	78	0	0	0	0	0	0	0	0	0	0	50	25	20
Sangamneri Goat Unit	0	0	0	0	0	0	1287	But ox 4 lit.	0	8	0	0	12	31	0	0	0
Sirohi Goat Unit	22	0	0	0	70	0	40	300	0	0	0	74	0	0	1000	70	0
Surti Goat Unit	0	0	0	0	0	0	480	240	0	0	0	0	0	0	0	0	0
Uttarakhand Local Goat Unit	0	0	0	0	0	0	997	0	0	55 2	151 7	0	0	0	0	0	0

## 1.5 TSP VILLAGE ADOPTION AND WORK PLAN

1. First base line survey and bench mark.
2. Production system characterization survey.
3. Homestead agriculture status.
4. Present practices and indigenous knowledge.
5. Training need and technology need.
6. Specific technology intervention required.
7. The rate of improvement due to technical intervention and impact.



### 1.6 PROGRESS UNDER TRIBAL SUB –PLAN (TSP) COMPONENTS (2018 – 19)

Name of the Unit	No. of Farmers registered	No. of Goats registered	Physical Achievement during the Quarter			Supply of Inputs			Amount ear marked for TSP (Rs. in Lakhs)	Financial Achievement during the quarter (Rs. in Lakhs)
			Name & No. of trainings organized	No. of farmers participated	Frontline demonstrati on /exhibitions/ Exposure visits	Germplasm supplied	Preventive measures (in terms of medicine)	Feed & Mineral mixture supplied		
Bengal Goat Unit, Ranchi	80	389	04	491	7	96	23014	Feed 50 kg	4.84	4.84
Black Bengal Goat Unit, Kolkata	695	199	10	2271	156	552	6480	Mineral Mix. 158.4 kg	5.67	5.67
Changthangi Goat Unit	57	-	5	278	6	532	12594	-	6.64	6.64
Gaddi Field Unit, Palampur	21	532	6	73	21	279	4770	Concentrate feed 70 Qtls. & Mineral Mix. 40 kg	6.84	6.84
Ganjam Goat Field Unit, Bhubaneshwar, Orissa	97	828	2	280	16	424	17251	-	5.3	5.3
Malabari Goat Field Unit, Kerala	264	438	9	1251	59	15	125	-	0.00	0.00
Sirohi Field Unit, Vallabhnagar	45	970	9	-	9	364	10952	40 kg	4.94	4.94
Surti Field Unit, Navsari	48	71	1	463	27	41	1362	480 kg	0.77	0.77

**TABLE 2: VILLAGES COVERED UNDER TSP PROGRAMME DURING 2018-19**

Sl. No.	State	District	Sub-District	Village
1.	Jharkhand	Ranchi	Ranchi (Block – Chamho), Deoghar (Block-Palajori)	Jaynagra and Gaddi
2.	West Bengal	Nadia	South 24 Parganas (Canning), Jhargram	Jatirampur, Dhangri- Manapara.
3.	Jammu & Kashmir	Changthangi	Leh	Kharnak, Samad, Korzok
4.	Himachal Pradesh	Palampur	Kangra, Chamba, Mandi, Una, Bilaspur, Hamirpur, Solan	Bandvihar, Bohl Bandla, Chauntra, Nayagan, Dhrot, Lahla, Bandla, Drobi, Kandi, Rakh, Balla Parour, Cherna, Barot, Multhan, Bir, Chudhar, Napotha Rakh, Vindiyasani Dhar, Chudhrer, Sutkar, Majheen, Kauna, Naina Devi, Tobha, Nachair, Sughar, Aima, Bringti, Bhagotla, Lohardi, Arki, Joharjee, Nahlian, Jarundi, Balahara, Oach, Parontha, Mehatpur, Peernigah, Kharkari, Saloha, Mandhali, Pharobarh, Nadaun, Rangas, Kangoo, Karsog, Dharampur, Kumarhatti.
5.	Rajasthan	Banswara (Udaipur)	(Cluster- Karget, Barapa)	Khalia, Godwa, Barapal
6.	Gujrat	(Dang) Navsari	Waghai (Cluster- Cluster- Bharuch, Karjan, Jambusar, Navsari, Bilimora, Vapi)	Segwa, Bambusar, Zangar, Samri, Kavi, Tankari, Devla, Tavdi, Amri, Sagra, Mamadev, Khaparwada, Devsar, Malvan, Rampore, Amdi, Ambach, Sadarveri, Piramal.
7.	Odisha	Muniguda, Rayagada, Deogar (Bolangir), Bismurtack (Raygada) and Lanjigarh (Kalahandi)		Golatribe, Bada brunda badi, Badagatiguda, Baddai Kala, Bapi Khuti, Bhurikhumar, Brunda Badi, Chhelia Nala, Hati Padar, Hikura jhala, Jamaraguda, Kunti Badi, Majhi Holna, Majloma, Majunma, Nuagaon, Nuasahi Chhelia Nala, Patraguda, Potupadar, Puradi Guda, Rani Kupa, Sanagatiguda, Sara brundabadi, Talasini Nala, Talchlinal and in the villages of Ganjam district.

**TABLE 3: DETAILS OF ANIMAL DISTRIBUTION, TRAINING PROGRAMME AND PUBLICATION OF AICRP UNITS DURING 2018 – 19**

S. no	Breeding Units	Total Animal Sold	Adult Male sold	Adult Female sold	Buck Distribution	No of trainings	No of does available	Publications
1	Andaman Local Goat Unit	159	81	78	17	09	2338	1 Lead paper + 1 Manual
2	Assam Hill Goat Unit	356	173	183	16	11	2327	4 Research papers
3	Bengal Goat Unit, Ranchi	133	51	82	40	4	2433	-
4	Beetal goat Unit, Punjab	-	-	-	-	3	-	-
5	Black Bengal Goat Unit, Kolkata	455	257	198	29	10	1503	4 Research paper + 3 abstracts + 4 leaflet + 4 success story
6	Black Bengal Goat Unit, Patna	-	-	-	15	1	508	2 Leaflet/Booklet
7	Bundelkhandi Goat Unit, Jhansi	156	57	99	10	3	475	1 Folder
8	Changthangi Goat Unit	2039	1008	1031	12	5	4323	4 Booklet/leaflets
9	Gaddi Goat Unit	88	16	72	30	6	601	1 Leaflet + 1 Research Paper + 3 Abstract
10	Ganjam Goat Unit	808	424	384	31	2	1875	3 leaflet + 1 Booklet
11	Himalayan Local Goat Unit	7	7	0	02	6	283	1 Lead paper + 2 abstract
12	Malabari Goat Unit	153	87	66	17	9	1001	4 Research paper + 2 popular lead Article + 5 Abstracts + 1 Book in Local Language + 3 Leaflet/Pamphlet + 9 Presented Paper
13	Marwari Goat Unit	369	10	359	20	8	1418	1 Research Paper + 1 Abstract + 1 Leaflet/Pamphlet
14	Osmanabadi Goat Unit	298	20	278	32	10	538	14 Information booklet/leaflet + 4 Marathi article + 1 Research Paper + 3 abstract/Short paper + 2 Success story
15	Sangamneri Goat Unit	0	0	0	43	8	4904	2 Research Paper + 1 Lead article + 3 Abstract + 1 Book Chapter + 1 leaflet + 2 Success story

16	Sirohi Udaipur	249	73	176	45	9	1242	7 Research Paper + 5 Abstract	
17	Surti Goat Unit	68	19	49	41	01	89	3 Publications	
18	Uttarakhand Local Goat Unit (Pantnagar)	285	193	92	50	3	1117	1 Leaflet + 1 Success Story + 1 Booklet	
<b>Farm Units</b>									
1	Jamunapari goat farm unit	53	38	15	53	-	294	2 Research Paper + 2 Abstract + 1 Best poster presentation award	
2	Barbari goat farm unit	184	130	54	8	6	288	2 Research Paper + 4 Lead Paper + 3 Success Story + 3 Technical/Popular article + 3 Training Manual + 9 Book Manual Chapter + 6 paper presentation in Workshop/Symposia/Conference + 2 Awards	
3	Sirohi goat farm unit	117	109	8	4	15	312	1 Publication (International) is under review + 2 Article in manual + 1 Lead / invited paper + 2 Popular article + 1 research article	

**TABLE 4: DETAILS OF IMPROVED ANIMALS SUPPLIED FOR BREED IMPROVEMENT PROGRAMME (2018-19)**

Farm Unit	Animal sold	Adult Male	Adult female
Jamunapari goat farm unit	53	38	15
Barbari goat farm unit	184	130	54
Sirohi goat farm unit	117	109	8
<b>Total</b>	<b>354</b>	<b>277</b>	<b>77</b>



## 1.7 MODEL GOAT FARMERS 2018-19

Units Name	Name	Address
Andaman Goat Field Unit	Shri., Karrappasamy	New Bimblitan, South Andaman
Black Bengal Goat Field Unit, Kolkata	1. Sombari Murmu	village, P.O.- Aguibuni, Block - Jhargram, Dist – Jhargram
	2. Jostna Patra	Rangabelia, P.O.- Rangabelia, Block - Gosaba, Dist – South 24 Parganas
	3. Kabita Mandal	Beliapukur village under M-J Block, P.O.- Jiaganj, Dist - Murshidabad
	4. Sandhya Biswas	Ayeshpur village under Haringhata Block, P.O.- Narayanpur, Dist – Nadia
Marwari goat field unit	Kishor Singh Rajput	Joghpur
Uttrakhand Goat field unit	Roop Singh	Village: Tilpuri No. 2, Cluster: Tilpuri, Block: Gadarpur, Tehsil: Gadarpur, Dist - U. S. Nagar
Assam Goat Field Unit	Paheswari Devi	Village: Dighalbori, Baronggabari Dist - Marigaon, Assam
Changthangi Goat Field Unit	Tsering Angchuk (42)	Cluster: Kharnak, Village: DadhShayan
	Sonam Targais (47)	Cluster: SamadRokchan, Village/Place: Thukjey
Sangamneri Goat Field Unit	Anil Dashrath Gofane	Hivargaon Pavsa
Osmanabadi Goat Field unit	Bhagwat Ramrao Warat (75)	Sakat, Taluka Jamkhed, Dist - Ahmednagar
Malabari Goat Field unit	Dasan (56)	Bunglavuparambu, Jyothi Nagar, Tanur, Malapuram district, Kerala-676302
	Shri. Narayanan (55)	Pilatholi, Panangatoor, Tanur , Malappuram District, Kerala-676309
Sirohi Goat farm Unit, Avikanagar	Shri Goverdhan Jat	Soda village of Malpura Tehsil under Tonk district of Rajasthan



## 1.8 LINKAGES OF AICRP UNITS WITH OTHER ORGANIZATIONS

S. No.	AICRP Units	Linkages created with other organizations
1	Andaman Goat Unit, CIARI, Port Blair	<ul style="list-style-type: none"> <li>• KVK</li> <li>• Department of Animal Husbandry &amp; Veterinary Services, A&amp;N</li> </ul>
2	Assam Hill Goat Unit, AAU Khanpara, Guwahati (NEH)	<ul style="list-style-type: none"> <li>• Save our Souls (SOS), Guwahati Chapter</li> <li>• Rastriya Gramin Vikash Nidhi</li> <li>• Srimanta Foundation for Culture &amp; Society, Guwahati</li> <li>• SPREAD NE, Sonapur</li> <li>• Assam Centre for Rural Development, Guwahati</li> <li>• Uttar Betna Samaj Sangkarak Bahini, Goreswar (Baksa)</li> </ul>
3	Bengal Goat Unit, BAU, Ranchi (TSP)	<ul style="list-style-type: none"> <li>• KVK Jagarnathpur, ICAR</li> <li>• NGOs like AQSSA Goat Farm, Jamshedpur, Mahila Vikash samiti, Gumla.</li> </ul>
4	Black Bengal Goat Unit, WBUV&FS, Kolkata (TSP)	<ul style="list-style-type: none"> <li>• Murshidabad KVK and Jalpaiguri KVK.</li> <li>• Rangabelia &amp; Jatirampur village of Gosaba, South 24 Parganas district in collaboration with Tagore Society for Rural Development (TSRD).</li> <li>• Regional Station for Forage Production &amp; Demonstration, Kalyani, Govt. of India.</li> <li>• Rotary International, Tagore Society for Rural Development, Champa Mahila Samity, Nature, Sanjevani Khamar etc.</li> </ul>
5	Changthangi Goat Unit, SKUAST-K, Leh (TSP)	<ul style="list-style-type: none"> <li>• KVK Nyoma SKUAST-K.</li> </ul>
6	Ganjam Field Unit, OUAT, Bhubaneswar (TSP)	<ul style="list-style-type: none"> <li>• Central Institute of Women in Agriculture(CIWA), Bhubaneswar</li> </ul>
7	Malabari Field Unit, KVA & S, Trissur Kerala	<ul style="list-style-type: none"> <li>• Arya Vaidya Sala, Kottakkal</li> <li>• NABARD, Kerala</li> <li>• Chaldean Church of East, Thrissur</li> <li>• Milma (Kerala state Milk co-operative Producers Limited)</li> </ul>
8	Osmanbadi Unit, NARI, Phaltan (MH)	<ul style="list-style-type: none"> <li>• Taluka Krishi Mandal Adhikari Karyalay, Natepute.</li> <li>• Dhakale Grampanchayat and Talathi Office, Dhakale</li> <li>• Shree Maruti and Shree Jogeshwari Devsthan trust, Dhakale, district Pune.</li> <li>• With the joint efforts of Dhakale Gram panchayat and Tehsil office, Baramati a program “Shasan aapalya Daree” (Government at your doorstep) was organized at Dhakale on 11 January 2019.</li> <li>• Rajyog agro Farm, Shirwal.</li> <li>• Mandeshi Foundation, Mhaswad, District Satara.</li> <li>• Bank of Maharashtra, Hadapsar branch, Dist. Pune.</li> <li>• Aga Khan Foundation in Bihar</li> <li>• Krishi Vigyan Kendra (KVK), Sharadanagar, Baramati, District Pune</li> <li>• The Goat Trust, Lucknow, Uttar Pradesh</li> </ul>

		<ul style="list-style-type: none"> <li>• BOSCO Gramin Vikas Kendra, Ahmednagar</li> <li>• ICICI Foundation, Phaltan</li> <li>• Nidhi goat farm Vidani, taluka Phaltan, district Satara</li> <li>• Mahila Arthik Vikas Mahamandal, Solapur (Undertaking of Government of Maharashtra)</li> <li>• Krantisinh Nana Patil College of Veterinary Sciences, Shirwal.</li> <li>• Asean Agritechnologies private limited, Nashik.</li> </ul>
9	Sangamneri Field Unit, MPKV, Rahuri	<ul style="list-style-type: none"> <li>• Yuva Mitra, Sinner, Dist Nasik</li> </ul>
10	Sirohi Farm Unit , CSWRI, Avikanagar	<ul style="list-style-type: none"> <li>• State Animal Husbandry Department, Rajasthan, 2.KVK, Udaipur,</li> </ul>
11	Sirohi Field unit, RAJUV&AS, Vallabhnagar (TSP)	<ul style="list-style-type: none"> <li>• BAIF</li> <li>• Sahyog Sansthan</li> <li>• NMPS (RACP)</li> <li>• Hanuman Van Vikas Samiti</li> <li>• Gramin Vikas Trust (GVT)</li> </ul>
12	Surti Field Unit, N.A.U, Navsari (Gujarat) (TSP)	<ul style="list-style-type: none"> <li>• KVK Navsari</li> <li>• ATMA project, Bardoli and Surat</li> </ul>
13	Black Bengal Goat Unit , ICAR-RCER, Patna	<ul style="list-style-type: none"> <li>• CAU (DRPCAU, Pusa)</li> <li>• KVK, Jamui; KVK, East Champaran, NGO (Swastik Foundation, BAIF)</li> </ul>



## 2. RESEARCH ABSTRACT FOR THE YEAR 2018-19

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

Andaman goat field unit is operational at ICAR-CIARI, Port Blair, A & N Islands and working to improve production performance of goat in Island region. The unit is operational in 3 clusters viz. Port Blair, Baratang and Nimbudera. The base line information on production and reproduction traits, managemental practices, disease pattern and socioeconomic status of goat keepers were recorded. Identification of animals was carried out in the adopted villages. The closing balance of the registered flock was 3769 goats in the entire three clusters of which 2338 were female and 1431 were male goats. During the period 836 kids were born with the population growth of 88.55%. The overall least square means of body weights (kg) at birth, 3, 6, 9 and 12 months of age were  $1.46 \pm 0.02$ ,  $5.80 \pm 0.08$ ,  $9.83 \pm 0.14$ ,  $13.63 \pm 0.25$  and  $16.40 \pm 1.09$ , 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  $251.89 \pm 2.98$  days,  $11.93 \pm 0.88$  kg,  $407.86 \pm 3.55$  days,  $16.40 \pm 0.99$  kg,  $273.31 \pm 3.42$  days,  $98.66 \pm 15.86$  days and  $146.35 \pm 0.55$  days, respectively. The kidding percentage of 155.97 on the basis of does kidded and the kidding rate of 1.56 was recorded during the period. The percentage of singles, twins, triplets were 44.37, 53.82 and 1.79, respectively. During the year a total of 17 superior bucks of Andaman local goats were distributed to different villages of Nimbudera and Baratang clusters for genetic improvement programme. During the year, no major disease outbreak was reported. A total of 2938 goats were given the mineral mixture, 2329 were treated for different illness and 2829 goats were dewormed. The overall mortality during the period was 4.52 %, however the highest mortality was observed in kids. The mortality was mainly due to the diarrhea, bloat and poisoning. A total of 9 training programmes/health camps/field day were conducted during the year. Since the start of this project, there has been a considerable increase in the overall body weight gain, reduction in mortality percentage and enhancement of income. Mineral mixtures were provided to the pregnant does in the last stages of pregnancy. The mortality during the period was reduced to 4.52 % from 6.50 %. The weaning weight of the goat kids increased from  $5.64 \pm 1.02$  kg to  $5.88 \pm 0.11$  kg. A total of 65 leaflets were distributed to the farmers. The net income based on the productivity of per doe was found to be enhanced to 14.17 % over the last year.

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

The unit is operational at AAU, Khanpara & unit has 5 cluster such as Batabari, District Darrang, Tetelia Gandhinagar, District Kamrup (Metro), Nahira, District Kamrup (Rural), Tepesia, District Kamrup (Metro) and Digholbori, District Morigaon and has population of 3190 goats during the year. The population growth of 100.89% was recorded in the adopted villages. The mortality rate was 5.51% during reported period. A total of 687 animals and 122 culled animals were sold by the registered farmers with a total income of Rs.14, 52,225.00 indicating an annual income of Rs. 4,685.00 per house hold. Sixteen selected bucks of superior quality, have been distributed in the adopted villages and 11 numbers of existing bucks were exchanged among the units to avoid inbreeding. At present there are 51

numbers of superior bucks in the five field units distributed under the project AICRP on Goat improvement. Twenty nine vaccination camps to immunize 12083 animals, 31 deworming camps to deworm 5351 animals and 33 treatment camps to treat 5297 animals were organised during the period for adopted as well as non-adopted animals. The overall least squares means of body weights (kg) at birth, 3, 6, 9 and 12 months were  $1.22\pm 0.11$ ,  $5.31\pm 0.03$ ,  $8.05\pm 0.06$ ,  $10.79\pm 0.08$  and  $13.95\pm 0.80$  kg, respectively. The least square means of milk yield in 30, 60 and 90 days were  $3.89\pm 0.21$ ,  $7.13\pm 0.38$  and  $11.93\pm 0.83$  liter, respectively. The daily weight gain at 0-3, 3-6, 6-9 and 9-12 were 45, 30, 30, and 36 gm/day, respectively. The kidding rate was 1.61. Sixteen superior bucks and 54 germplasms were supplied to farmers for breed improvement. The genetic trend of 3, 6, 9 and 12 month of body weight were 5.01, 7.82, 10.48 and 13.73, respectively. The AICRP on Goat Improvement was successful enough to create awareness among the goat farmers through several extension activities like meeting, interactive sessions, training etc.

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

Barbari breed of goat has attained special significance as a meat breed due to higher weight gain, prolificacy, reproductive efficiency, sufficient milk to nourish their kids and most importantly suitability for stall feeding. The closing balance of flock was 638 during the year 2018-19. The population growth was 123% in 2018-19. 259 goats (173 male and 86 female) were provided to farmers and other stake holders. Overall mortality of the flock was 3.2%. Averages of weight at first service (WFS), age at first service (AFS), weight at first kidding (WFK) and age at first kidding (AFK), first kidding interval (FKI) & gestation period (GP) were  $20.2\pm 7$  kg,  $396\pm 14$  days,  $24.8\pm 6$  kg,  $552\pm 15$  days,  $231\pm 11$  days and  $146\pm 0.39$  days, respectively. Breeding efficiency on the basis of doe's available and doe's tugged were 68.37 and 83.04%, and kidding efficiency % on the basis of does available and doe's tugged were 95.5 and 115.5%, respectively. Kids born as multiple births year were 56.3% of total kids born. The kidding rate (litter size) was 1.40. The least squares means of body weight of kids at birth, 3, 6, 9, and 12 month were  $1.85\pm 0.017$ ,  $8.30\pm 0.09$ ,  $12.73\pm 0.16$ ,  $17.26\pm 0.29$ ,  $22.56\pm 0.36$  kg, respectively. Least square mean for 90 days milk yield, 140 days milk yield, total lactation yield and lactation length were  $71.08\pm 1.55$ ,  $97.49\pm 1.98$ ,  $91.34\pm 2.16$  and  $137.60\pm 2.90$ , respectively. There was a significant improvement in lactation performance over previous year i.e. 14% in 90D-MY, 21% in 140 day-MY and 17.70% in TMY. The Total milk recorded in 2018-19 was 11910 litres which was 21.2% higher (9827 liter) over the previous year. There were 32 multiplier flocks and 16 consortium flocks of Barbari goats which were created for genetic improvement, conservation and promoting scientific goat farming, development of goat based business and livelihood models in six states of India. The net profit per goat was ranged from Rs 4700 to 10000/year with an average of Rs. 5625.

### **4. Black Bengal Goat Field Unit, BAU, Kanke, Ranchi, Jharkhand**

The unit is operational at BAU, Kanke, Ranchi and Jharkhand. Four centers of AICRP have been established in different zones of Jharkhand having 7855 goat in which 2527 were males and 5328 were females. Data on growth and reproduction parameters have been

recorded and analyzed. A total of 2 buck & 20 does (on the basis of growth and multiple births) were selected and distributed among 10 farmers under TSP program. Total 40 New Bucks were distributed among the farmers at four centers and also exchanged. Selection differential of male at 12 month of age were estimated to be 1.79 kg. The overall means of body weights at birth, 3, 6, 9 and 12 months of age were found to be  $1.30\pm 0.11$ ,  $5.30\pm 0.14$ ,  $8.01\pm 0.13$ ,  $10.50\pm 0.09$ ,  $12.76\pm 0.36$  kg, respectively. The overall reproductive parameters 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  $272.68\pm 0.05$  days,  $10.50\pm 0.09$  kg,  $420.55\pm 0.51$  days,  $12.76\pm 0.36$  kg,  $68.33\pm 0.44$  days,  $216.24\pm 0.76$  days and  $146.32\pm 0.16$  days, respectively. Kidding rate (litter size) of goat was estimated as 1.39 with 170% kidding. All the goats in coverage areas were vaccinated for PPR (3970 goats), dipping (3488 goats) and deworming of 4041 goats were done. Due to timely intervention mortality has come down to 2.41% Training on 'Scientific Goat Rearing' was organized in which 50 Tribal farmers in three Batches of Tribal Village Lepsar, Choreya, Harra (Chanho) under TSP programme were participated and One exposure visit of tribal goat farmers was conducted. Two exposure visits of 50 farmers from different clusters were organized and 39 farmers visited Kisan Mela AGROTEC 2019. Total 40 farmers have attended ten days training on Goat Farming.

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

The Black Bengal unit is operational at West Bengal Veterinary University, Kolkata. In 2018-19 with the addition of a new cluster at Tarai Zone (Purba Mallick Para village) under Dhupguri Block of Jalpaiguri District, the project is now operational at five clusters covering 10 village centres i.e. Ayeshpur and Ganguria village (Nadia Cluster); Jatirampur and Rangabelia village (Sundarban Cluster); Bamunia and Beliapukur village (Murshidabad Cluster); Manapara-Malapada and Dhangri-Ranidihi village (Jhargram Cluster); Purba Mallickpara-ICDS Para and Purba Mallickpara-School Para village (Dhupguri Cluster). During 2018-19 there are 1361 registered does at Ayeshpur, Ganguria, Jatirampur, Rangabelia, Bamunia, Beliapukur, Manapara-Malapada, Dhangri-Ranidihi. Amongst 695 farmers under the category of Schedule Caste (447 nos.), General (157 nos.), Schedule Tribe (80 nos.) and Other Backward Class (11 nos.) in five clusters. A total of 1634 kids were born from 903 kidding during 1st April 2018 to 31st March 2019. The closing flock strength was 3209. The population growth rate of Black Bengal was 219.47%. The average flock size of Black Bengal goat in adopted area was 6.66. The average body weight at birth, 3 month, 6 month, 9 month and 12 month were  $1.34\pm 0.00$ ,  $5.49\pm 0.03$ ,  $7.82\pm 0.04$ ,  $10.93\pm 0.05$  and  $13.66\pm 0.06$  kg, respectively. The milk yield was  $3.59\pm 0.02$ ,  $7.04\pm 0.04$ ,  $9.52\pm 0.07$  and  $10.71\pm 0.08$  kg during first 15 days, 30 days, 45 days, and 60 days of lactation, respectively. The average lactation period was  $60.69\pm 0.21$  days. The average age at first service, age at first kidding, service period, gestation period, and kidding interval were  $237.91\pm 2.36$  days,  $391.07\pm 4.56$  days,  $117.52\pm 9.09$  days,  $147.88\pm 0.09$  days and  $272.05\pm 9.96$  days, respectively. The average kidding rate (litter size) was 1.81. Twin born kidding is maximum (51.94%) followed by singlet kidding (34%), triplet kidding (13.28%), and quadruplet kidding (0.78%). Total 52 bucks were

selected from villages based on their 6 months body weight and prolificacy of their dams and distributed in the adopted village units in addition to previous males for selective breeding. During 2018-19 a total of 19 does were also distributed to the selected poor tribal farmers in adopted villages under TSP. In addition to this, feeder, water bottles and torch lights were also distributed to 75 tribal farmers. About 84% farmers have the flock size of 1 to 3 does, followed by 4 to 6 does (14%), and 2% farmers have above 6 does. It is an indicator for sustainability of goat rearing among the farmers with flock size 1 to 3 does with their available resources. Twenty mass deworming camp (covering 2593 goats), Thirty vaccination camp (covering 3887 goats) have been organized in adopted villages. Apart from this mineral mixture to all registered goats and concentrated feed to the pregnant does were provided. With the intervention of health care and prevention the overall mortality was 5.50 %. During this year 10 training programme (625 farmers attended-duration 2 day), 19 nos. of gosthi meeting (579 farmers attended), and 22 nos. of seasonal advisory (730 farmers attended) were organized in adopted villages.

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

The unit is operational at HAMARI, SKUAST, Kashmir, Leh-Ladakh, with the main objective of breed improvement for pashmina fibre and meat production. Keeping in view the vast hostile terrain of Changthang region (the habitat of Changthangi Goat) and extensive system of rearing whole Ladakh area was divided into four major zones having 3-4 clusters/ villages in each zone. Zone-I with three major clusters/villages viz. Kharnak, Samad and Korzok was the initial set up of the project and this Year Zone-II comprising of Gya, Rongo, Hanley and Chumur clusters were adopted. This year, addition of newborn male kids (680) and female kids (720) and by age group resulted in a total addition of 1771 by birth/age totaling to 3761 goats. The closing balance as on 1.4.2019 was 12732. The overall population growth for this year was 52.24%. The average body weight at birth, 3 months, 6 months, 9 months and 12 month were  $2.47\pm 0.45$  kg,  $6.66\pm 0.12$  kg,  $9.76\pm 1.23$  Kg,  $13.00\pm 0.12$  kg and  $16.74\pm 1.12$ kg respectively. The average pashmina production of all the three clusters for the year was recorded as  $271\pm 14.30$ g. The number of does available for breeding purpose for the year 2018 was 4323 out of which 3761 does kidded. There was 3743 single born and 9 twinning. The overall kidding percentage among the registered goats in all the 4 clusters was 86.99% with an overall litter size of 1.00. 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  $587.78\pm 12.26$ ,  $25.22\pm 2.21$ ,  $708.90\pm 5.18$  and  $24.22\pm 0.14$  respectively. The average gestation period, service period and first kidding interval were  $156.67\pm 1.12$ , 175 days and  $365\pm 1.67$  days respectively. During the year, the overall mortality rate was 3.84%. Most of the mortality attributed this year was the intense snow in Changthangi area which resulted in covering of pasture with a layer of snow and thus resulted in acute fodder shortage and mortality most in young stock and old animals. The health management during this year, which includes general treatment, vaccination, dosing and dipping, was done for all the goats of the 4 clusters (approximately 12,989 goats) from time to time. The compost making from goat manure has been done successfully at farm for the last four years. This year 7 improved bucks were distributed to the farmers.

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

The unit is operational at college of veterinary science, HPKVV, Palampur, Himachal Pradesh. The unit has 5 clusters at Chamba, Kangra, Kullu, Bilaspur and Mandi. The closing balance as on 31.03.2018 was 1302. The least squares means during 2018-19 for body weights at birth, 3 month, 6 month, 9 month and 12 months of age were  $3.11 \pm 0.02$ ,  $15.44 \pm 0.06$ ,  $19.83 \pm 0.09$ ,  $24.53 \pm 0.10$  and  $27.55 \pm 0.11$  Kg, respectively. For breeding inputs, a total of 41 male kids of 4-6 months age group were selected from farmer's flocks 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 30 males were finally distributed to 30 different farmers as a breeding input. In addition, 35 male kids were also purchased during March, 2018 and are being reared at Palampur center for further distribution as breeding buck to the farmers during 2018-19. All selected animals were provided health coverage under migratory field conditions viz. vaccination against PPR (2000 doses), FMD (1320 doses), de-worming against endo-parasites after fecal sample analysis (1450 animals), periodic health check-ups etc. Strategic supplementary feeding was also provided in the form of mineral mixture (400 Kg) and concentrate feed (70 qtls.). The overall population growth was observed to be 108.55%. The overall mortality and morbidity incidence was found to be 8.10 and 14.5 %, respectively. The incidence of twin birth recorded was 23.0 %. The kidding percent of the flocks were observed to be 77.92 and kidding rate as 1.23. Under capacity building, 6 training camps, 4 health camps and 5 gothis were organized under field conditions and an exposure visit of the farmers and field staff was arranged to CIRG, Makhdoom.

## 8. **Ganjam Goat Field Unit, OUAT, Bhubaneswar, Odisha**

The unit is operational at Orissa veterinary college, Bhubaneswar, OUAT. The unit is operational at 3 clusters such as Chhatrapur, Rambha and Khallikote. In the current year there are 97 number of registered farmers namely Chhatrapur, Rambha, Khallikote and Jeerabadi, Out of the total farmers 71 farmers are old farmers and 26 farmers are new farmers. The new farmers enrolled were four from Podapadar village, three from Chikalakhandi, two from Minchinpatna, four from Sanaramachandrapur, six from Golamathura, two from Gareda, one from Baduya and four from Lunigundi. The total population of goats under registered farmers stands at 4523 with 1222 from Chhatrapur center, 1618 from Rambha Center, 1301 from Khallikote center and 382 from Jeerabadi center. Baseline information on distribution, prevailing management practices, production, reproduction and socio-economic profile of the farmers have been collected, analyzed and reported to P.C. unit. The population growth during the year was 67.9%. The overall means of body weights of goats were  $2.85 \pm 0.03$ ,  $8.81 \pm 0.09$ ,  $11.92 \pm 0.12$ ,  $14.83 \pm 0.16$  and  $19.60 \pm 0.31$  kg for weight at birth, 3, 6, 9 and 12 month of age, respectively. The improvement in body weights at 9 month age and one year age has been 2.95 kg and 7.17 kg respectively. The numbers of kids born were 1661 from 2034 breedable does from all the three centres of Chhatrapur, Rambha and Khallikote with kidding percentage 81.26 percent in the current year. Kid mortality is controlled around five to six



percent over the years and this year it was 5.32 percent only. The overall average milk yield of Ganjam goats at 30 days and 60 days were  $6.58 \pm 1.33$  Kg and  $12.49 \pm 2.44$  kg, respectively. A total of 6598 vaccinations were done against PPR, goat pox, HS and FMD and 9026 deworming dosages were administered. A total of 1517 goats were treated. Pedigree recordings were being done for the 55 breeding bucks and birth weights of 997 progenies, weight at three months of 464 progenies and weight at 6 months of 424 progenies, Weight at 9 month of 131 progenies and weight at 12 months for 70 progenies were recorded and genetic parameters were estimated. Base line survey was undertaken in the new villages. The small farmers are being chosen for the project so that pedigree recording could be possible facilitating genetic evaluation. One Goat farmers contact center was opened at the village Jeerabadi in the same line as the other three operating cluster to cater to the need of the farmers of the center. A total of two farmers' training programme were organized at Jeerabadi and Rambha on 26th February 2019 and at Balbaspur, Bhawanipatna on 27, 28 and 1st March 2019 respectively where a total of 280 goat farmers of nearby area were trained on scientific goat rearing practices. A total of 37 young bucks 3-4 years of age having average superiority of atleast +2.5Kg higher body weight than the average of the flock at 3 month stage were purchased and being reared at farmers herd. One page Oriya pamphlets developed each for Haemorrhagic Septicemia, FMD and Enterotoxaemia, Goat Health Calendar in addition to the pamphlets on PPR, Goat pox and Foot Rot, CCPP and Contagious Ecthyma that were distributed to the farmers' information. One four page Breed information leaflets for Ganjam goat was developed and one abstract were published.

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

The unit is operational at IVRI, Campus, Mukteswar, Uttarakhand. The unit is operational at Lamkot, Khola Gandhak, and Jur cluster. These goats are mainly reared by small and marginal farmers for meat purpose. Three clusters namely, Lamkot of Lamgarha block, Khola and Gandhak of Dhauladevi block and Jur Kafun village of Hawalbagh block in Almora district have been adopted after surveying the its breeding tract and distribution. Khanara village of Lamgarha block of Almora district has also been surveyed. Total ninety nine farmers have been registered and 476 goats were added in this period in four clusters. The mean body weight of male at birth, 3, 6, 9 and 12 months were  $1.94 \pm 0.05$  kg,  $8.08 \pm 0.28$  kg,  $11.87 \pm 0.28$  kg,  $14.76 \pm 0.46$  kg and  $20.84 \pm 0.53$  kg, respectively. The mean milk yield of the lactating doe and lactation length were  $23.94 \pm 0.70$  L/ lactation and  $74.35 \pm 1.23$  days, respectively. The representative samples were subjected for larval culture and found *Haemonchus contortus* (throughout year) and *Teladorsagia circumcincta* (winter) are predominant nematodes infecting goats of these clusters. The major achievement was improvement in kidding rate. Health calendar for this region was prepared and the preventive/prophylactic measures are being done for FMD, PPR, GI parasitism and coccidiosis. Six training programme on different aspects of goat production at hilly area were organized at Lamkot, Kanara and Jur Kafun villages with 148 participants. One workshop on “Goat farming for livelihood security of farmers of Uttarakhand under changing climatic scenario” was organized on 22.02.2019 at Mukteswar campus with 155

participants. Ten animal health camps covering 1,563 animals of all clusters were conducted and two exposure visits of farmers to institute farm were also organized. Baseline data of Lamkot and Jur Kafun villages were recorded and analyzed. Ten bucks of 3-6 months of age were procured from clusters and maintained at farm in order to select the superior bucks on the basis of growth performance. Steel buckets, feed supplements and thermometers were distributed among beneficiaries as farmers' centric activities.

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

The flock strength of nucleus herd of Jamunapari goats at CIRG for the year 2018-2019 was 614. The population growth of the flocks was 92.9%. The overall mortality of the flock during the year 2018-19 was 6.16% and annual culling rate was 8.48%. The least squares means body weights of kids at birth, 3, 6, 9 and 12 months of age were 3.630kg, 9.740kg, 13.546kg, 18.171kg and 23.270kg, respectively. Year, season of birth, type of birth sex and Parity of dam had significant effect ( $P<0.01$ ) on kid's body weight up to 12 months of age. Males had higher body weight than females at all the ages. Year by parity interaction had significant effect ( $P<0.01$ ) on body weight at the age of Birth weight. Season by sex interaction had significant ( $P<0.01$ ) effect on body weight at the age of 3month, 6month, 9month and 12 month. Year by Sex interaction had significant ( $P<0.01$ ) effect on body weight at 3, 6, 9 and 12 month of age. Type of birth by sex interaction had significant ( $P<0.01$ ) effect on body weight at 6 month of age. The Average Daily weight Gain (ADG) of the kids under intensive management was 59.040, 113.383, 96.329, 167.727 and 114.974g/day, respectively during 3-6, 3-9, 3-12, 6-9, and 6-12 month age group. Least squares means of part lactation milk yield in 90 days and 140 days were  $77.263 \pm 2.104$  and  $109.683 \pm 3.246$  liters, respectively during the year 2018-19. 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 season of kidding had highly significant ( $P<0.01$ ) on 90days milk yield. The doe, which had multiple births, produced more milk in comparison to doe having single kid. During this year, a total of 209 does kidded 284 kids, out of which single, twin and triplet born kids were 135, 73 and 01 respectively. Reproductive performance of Jamunapari goats in terms of breeding efficiency and kidding percent on the basis of does selected for breeding were 84.27% and 122.4%, respectively. The kidding rate was 1.36. Total 53 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.

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

The unit is operational at KV&ASU Mannuthy, Thrissur, Kerala. The unit is operational at following cluster such Thalassery, Thaliparamba, Badagara, Perambra, Thavanur and Tanur located in Kannur, Kozhikode and Malappuram districts in northern and central parts of Kerala. The registration of farmer's flock was carried out in six field centres. The elite germplasm centre was maintained at Goat and Sheep Farm, College of Veterinary and Animal Sciences, Mannuthy, Thrissur. The field centers are Thalassery, Thaliparamba, Badagara, Perambra, Thavanur and Tanur located in Kannur, Kozhikode and Malappuram

districts in northern and central parts of Kerala. Two organized farms with more than 100 goats under NGOs at Kottakkal, Malappuram district and Pudukad, Thrissur district have also been included during the year 2012 and 2018, respectively. Baseline information on production and reproduction traits, management practices and production trend were recorded and analyzed. Total of 264 farmers have been registered under the project and provided with breeding inputs, feed, feed supplements and health coverage. The closing balance was 3598. About 1018 adult females have been brought under insurance coverage. Total of 17 bucks of Malabari breed was selected on the basis of 6/9 months body weight and distributed to farmers of various field centres. During 2018-19, 979 kids were born from 566 kiddings, of which 513 were females. Overall population growth recorded was 88.30% and about 17.75 % of the animals were sold during the year. The overall mean body weight recorded at birth, three, six, nine and twelve months of age were  $2.39\pm 0.01$ ,  $8.61\pm 0.20$ ,  $15.40\pm 0.42$ ,  $20.70\pm 0.40$  and  $23.16\pm 0.42$  kg, respectively. The average daily milk yield recorded was  $0.88\pm 0.05$  litres. Mean lactation yield was  $75.80\pm 6.60$  litres with lactation length of  $84.60\pm 6.70$  days. The overall mean age at first service and age at first kidding were  $246.50\pm 14.20$  and  $389.30\pm 12.70$  days, respectively. Mean gestation period and inter kidding interval were  $149.50\pm 0.20$  and  $268.79\pm 29.30$  days, respectively. The kidding rate was 1.69. Percentage of singles, twins, triplets and quadruplets were 47.03, 45.52, 7.28 and 0.17, respectively. Multiple births were high at Tanur (70%) followed by Taliparamba (63.70%) and Vadakara (61.03%) cluster. Pneumonia followed by enteritis was the common disease in the goat population and the mortality rate was 3.30% in the project area. As capacity building, five On-farm hands on training with 2 days duration to 74 farmers, 4 field trainings were organized to 132 farmers of Tanur, Perambra and Taliparamba clusters. Besides, 29 on-farm / field classes of 2 hour duration was imparted to 750 farmers through different agencies like Animal Husbandry Department, Agricultural Technology Management Agency, Kerala State milk Marketing Federations and NABARD. Two trainings for one day duration were offered to vocational students. Technologies for FAMACHA eye colour chart, Probiotic goat milk ice cream, treatment for orf were standardized. A goat shed was designed to accommodate 20 goats for high rain fall area. Published one book on goat rearing in local language with ISBN: 978-81937921-1-7, four research papers in the peer reviewed International / national Journals. Nine technical papers and 6 abstracts were presented in the International / National conference/seminars.

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

The unit is operational at RAJUVAS, Bikaner. The unit is operational in five clusters such as Deshnok, Daiya, Kalayansar, Raisar and Kan Singh Ki Sird villages. The performance recording on growth, milk yield, reproduction and health were carried out on 1700 breedable does. The 70 farmers were registered under the unit. The 20 farmers out of 70 farmers were under the category of Schedule cast sub plan. Twenty new bucks were distributed to registered farmers in adopted areas for breed improvement. The population growth was 104.92 % during the year. The overall body weights (2018-19) at different stages of growth were  $2.67\pm 0.011$  at birth,  $8.75\pm 0.027$  at 3 month,  $14.70\pm 0.037$  at 6 month,

18.66±0.063 at 9 month and 23.58±0.117 at 12 month of age. The body weight at birth was improved by 18.74 % over the baseline performance (2.257 kg). The average milk yield was 36.23±0.06 liters in 30 days, 67.77±0.093 liters in 60 days, 87.83±0.123 liters in 90 days, 97.91±0.128 in 140 days and 91.02±0.136 liters in lactation length 107.86±0.143 during 2018-2019. The kidding percentage and kidding rate was 105.22 % and 1.06, respectively during the period. The average age at first mating was 307.74±0.557 days with body weight of 25.50±0.130 kg whereas the average age at first kidding was 458.92±0.553 days with body weight of 29.75±0.144 kg. The first kidding interval was observed 359.07±0.469 days with service period of 215.92±0.216 days. The incidence of abortions and stillbirths were 10.21% in the registered farmer's flock. The registered goat breeders were provided preventive and curative health coverage. The total numbers of case covered under health coverage were 26,955 which included both prophylactics (66.76 %) and curative (33.24%). Out of total 17,995 prophylactic measures, 7084 were for endo-parasite, 2791 for ecto-parasite, 2165 for mineral deficiencies, 1985 each for FMD, ET and PPR vaccination. All the registered goats were dewormed twice a year i.e. June-July and Oct.-Nov. with Fenbendazole powder 25% and Levamisole hydrochloride alternatively. All the registered farmers were given the centric input and other benefits such as Umbrella, water bottle, mojari shoes and mineral bricks. Eight trainings were conducted for capacity building of registered farmers in all the five clusters.

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

The unit is operational NARI, Phaltan. Osmanabadi field unit is operational in different clusters such as Ahmednagar, Beed, Pune and Satara districts. This year the Osmanabadi goat field unit adopted one new cluster - Malshiras taluka in Solapur district. The production performance of goats in farmers' flocks was assessed in the low rainfall, drought-prone, dry, Deccan plateau regions of five districts in Maharashtra State viz. Ahmednagar, Beed, Pune, Satara and Solapur districts. Five hundred thirty eight Adult does (120 in Ahmednagar, 31 in Beed, 202 in Pune, 46 in Satara and 139 in Solapur districts respectively) are being recorded. These belong to 169 goat keepers, indicating that about 3.18 goats are reared per household on average. 1007 Kids were born in 623 kidding of 526 does during April 2018 to March 2019, making the average litter size 1.62. The closing balance is 1223 goats in total. Overall mortality was 4.5%. Six Osmanabadi bucks were purchased during the period April 2018 to March 2019, with six months weights of 16 Kg to 27 kg and dam's milk yield 1 to 1.8 litres per day. The standardized selection differential works out to 2.5 standard deviation units. The total number of bucks purchased since 2009 is 77. During 2018-19, total 4,702 Osmanabadi buck straws were supplied to A.I. technicians, farmers and entrepreneurs for breeding Osmanabadi goats. The least squares mean 90-day milk yield of Osmanabadi does to be 102.4 kg with 1506 records. This was measured using the weigh-suckle-weigh method. This establishes the Osmanabadi breed to be among the top five dairy goat breeds in India. The least squares mean 90-day milk yields of does having singles, twins and triplets were 68.1, 103.4 and 135.8 Kg respectively, indicating that milk yield increases with the number of kids. The heritability of 90-day milk yield was estimated to be 0.17±0.04. We have published 14 information

booklets/leaflets in Marathi language to give information to goat keepers on better goat management practices. 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.

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

The unit is operational at MPKV, Ranchi and the unit has following clusters such as Sangamner, Shrirampur, Rahuri, Belha and Sinner. The baseline information pertaining to growth, reproduction, production and management practices followed by farmers 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 2310 breedable does. The area under execution is divided in five centres (clusters) viz; Sangamner, Shrirampur, Rahuri, Belha and Sinner covering three districts i.e. Ahmednagar, Nasik and Pune. Total 43 breeding bucks were rotated in the field during 2018-19 and total 2818 kids were born in the field. The overall least square means obtained for birth, 3, 6, 9 and 12 month body weights were  $2.14 \pm 0.02$ ,  $9.92 \pm 0.06$ ,  $15.42 \pm 0.13$ ,  $19.48 \pm 0.16$  and  $23.87 \pm 0.22$  kg, respectively. All the nongenetic factors i.e., village cluster, year of birth and season of birth exerted significance influence ( $p < 0.01$ ) on body weights upto six month of age, while sex and sire influenced the body weights significantly ( $p < 0.01$ ) upto 12 months of age. The overall means for age at maturity, age at first conception and age at first kidding were  $248.92 \pm 8.14$ ,  $264.71 \pm 20.02$  and  $419.17 \pm 19.58$  days, respectively. While the service period and kidding interval were  $124.32 \pm 4.08$  and  $254.98 \pm 4.08$  days, respectively. The number of kids per kidding was  $1.67 \pm 0.07$ . The 90 days milk yield was  $99.57 \pm 2.16$  L.

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

The opening balance of flock strength on 01.04.2018 was 194 males and 387 females totaling 581 animals. The additions during the year were due to birth of 159 male and 157 female kids. The reductions were due to death of 12 males and 16 females, culling of 11 males and 75 females, sale of 106 males and 17 females and free distribution of 4 males to the registered farmers. The closing balance as on 31.03.2019 was 220 males and 448 females totaling 668 animals. The least squares means of birth, 3, 6, 9 and 12 month body weight of 2017-18 born animals were 2.920.06, 15.440.29, 24.330.48, 29.110.48 and 34.180.53 kg, respectively. Males were heavier than the females at all stages of growth. The least squares means for milk yield at 90 days, 150 days and total lactation milk yield, and lactation length of does kidded during 2017-18 were 71.360.96, 105.372.25 and 95.931.94 litre, and 148.592.53 days, respectively. The Least squares means for peak yield and peak week of these does were 1.160.02 litre and 2.740.14 week, respectively. During 2018-19, out of 242 does available for major breeding, 238 were tugged and 215 kidded with 34 giving birth to twins and 02 triplets. The tugging percentage was 98.35. The breeding efficiency was 92.53% and 94.09%, on the basis of does available and does tugged. The kidding percentage was 103.73 and 105.49% on the basis of does available and

does tugged, respectively. The litter size was 1:1.16. The mortality rates in 0-3, 3-6, 6-12 month age group and in adults were 4.73, 0.42, 1.38 and 1.18 percent, respectively. The overall mortality rate based on animals available and exposed at different stages of growth was 1.96 percent. A total of 123 animals comprising of 106 males and 17 females were sold to the progressive farmers, Government and non-government agencies for improvement of their goats for meat and milk production. In addition to these, 04 superior Sirohi bucks were distributed free of cost to the registered goat farmers under MoU for breeding and improvement of their goats. The total revenue generated from sale/transfer of different items like animals, milk etc. during the year was Rs. 17,04,173.00.

#### **16. Sirohi Goat Field Unit, College of Veterinary Sciences & AH, Vallabhnagar, Rajasthan**

The unit is operational at college of veterinary science, Vallabhnagar. The unit has following clusters such as Devgarh, Karget, Bojunda Farm. 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 closing balance of the registered flock was 1965 animals including 1242 adult females. During report period, 970 kids were born out of which 492 were males and during report period population growth was 91.28%. Total 364 males were sold out of which maximum 318 males were sold from adult age group for breeding. The least squares means for body weight at birth, 3, 6, 9 and 12 months of ages were  $2.41 \pm 0.02$ ,  $12.33 \pm 0.35$ ,  $16.31 \pm 0.49$ ,  $19.82 \pm 0.63$  and  $24.19 \pm 0.54$  kg, respectively. Year, season, sex of kid and type of birth have significantly affected on the body weights. Single born kids were significantly heavier than the multiple born kids at all the ages. The overall least square means for milk yield over 30 days, 60days, 90 days, 150 days, lactation yield and lactation length were  $20.63 \pm 1.42$ ,  $44.38 \pm 2.69$ ,  $64.42 \pm 3.67$ ,  $96.99 \pm 4.65$ ,  $98.01 \pm 4.58$  lit. and  $152.70 \pm 1.32$  days, respectively. Period, Season of kidding, type of birth had significant effect on milk yield. The lactation order played a significant role in milk yield. The overall least squares means 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  $472.55 \pm 10.86$  days,  $26.03 \pm 0.15$  kg,  $622.62 \pm 10.87$  days,  $29.13 \pm 0.15$  kg,  $382.66 \pm 3.78$ ,  $232.78 \pm 3.77$  and  $149.88 \pm 0.05$  days, respectively. The kidding rate (litter size) was 1.14. During report period 4701 animals were dewormed, dipping was carried out in 4096 animals. Further, 1555 and 600 animals were vaccinated for ET & PPR, respectively. The overall mortality rate was 4.30%.

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

The unit is operational at N.A.U., Navsari, and Gujarat. The unit has following clusters such as Bharuch, Karjan, Jambusar, Navsari, Bilimora and Vapi. The closing balance of the farm flock was 153 animals including 122 females. Out of 122 females 89 females were breedable. During current year, 68 kids were born out of which 34 were males. 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. Total 41 males were sold out of which maximum 19 males were sold after 12 months age for breeding purpose. Overall population growth of 70.78 % was recorded. The least squares means for body weight (2014-19) at birth, 3, 6, 9 and 12 months of ages was  $2.051 \pm 0.013$  (1842),  $8.192 \pm 0.018$  (1304),  $12.865 \pm 0.120$  (1023),  $18.525 \pm 0.121$  (856),  $21.636 \pm 0.210$  (422) kg, respectively. The least squares mean weight of single born kids was found to be significantly higher than the twins and triplet kids at all the age groups except 12 months age. The overall least squares means for milk yield over 90 days, 150 days, lactational yield and lactation length was  $79.03 \pm 2.00$  (529),  $130.07 \pm 2.78$  (418),  $133.68 \pm 4.45$  (539) Kg and  $176.37 \pm 3.51$  (539) days, respectively. Surti goats with higher litter size were found to be better producer compared to their counter parts. Age at first mating, weight at first mating, age at first kidding, weight at first kidding, service period, kidding interval and gestation period were  $483.23 \pm 31.80$  (27) days,  $22.63 \pm 0.61$  (27) Kg,  $627.86 \pm 31.70$  (27) days,  $26.60 \pm 0.59$  (27) Kg,  $176.18 \pm 11.63$  (32),  $335.73 \pm 11.36$  (32),  $149.55 \pm 0.92$  (32) days, respectively. During the year 68 kid from 48 singlet and 20 from doublet were kidded. Total 40 breeding bucks along with 45 breedable females 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. In total, 328 germplasm including 185 males and 143 females had been supplied by Surti field unit during last five years. During current year 251 animals were dewormed, Mineral mixture and antibiotics were also used at farm unit. Around 210 doses of FMD, PPR and HS vaccine had been given to the goats maintained at Surti farm unit. Overall mortality in Surti flocks was 6.64%. Sensitization about benefits of AICRP on Goat scheme was made through various training programs. A training of one day entitled "Profitable goat farming through scientific methodologies" was organized by Surti farm unit in which 48 female tribal farmers had participated. With continuous bilateral efforts from farmers and Surti field unit, around some village level goat cooperatives had been started in these villages. Additionally, nine (9) one day on campus trainings benefiting 415 farmers in collaboration with ATMA project were conducted.

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

The unit is operational at GBPUA&T, Pantnagar. The unit is operational at five clusters such as Bara, Tilpuri, Bhimtal, Kunda and Majhera. A total of 1,414 kids using 73 bucks and 1,233 doe have been born during reporting period. The average body weights were recorded as  $1.94 \pm 0.01$ ,  $9.79 \pm 0.06$ ,  $13.51 \pm 0.07$ ,  $17.23 \pm 0.09$  and  $21.02 \pm 0.11$  kg at birth, 3, 6, 9 and 12 months of age, respectively. The average milk yield at 30, 60, 90 and 120 days were found as  $11.67 \pm 0.07$ ,  $26.70 \pm 0.11$ ,  $45.48 \pm 0.17$  and  $58.74 \pm 0.58$  ltr, respectively. The average lactation length and lactation yield were  $118.38 \pm 2.52$  days and  $56.84 \pm 0.84$  ltr, respectively. The average age and weight at first mating were recorded as  $277.95 \pm 3.31$  days and  $18.13 \pm 0.13$  kg, respectively. Kid mortality between 0-3 months was recorded as 9.09% and adult mortality as 3.36% with total flock mortality as 6.88%. The kidding rate has been recorded as 1.57 with remarkably higher number of twinning and triplet kidding as

51.67% and 2.56% respectively. A nucleus flock of Pantja goats has been established at Pantnagar, wherein 59 females and 46 males are maintained. Various inputs like compounded goat feed (1,294 bags, each of 10 kg), mineral mixture (997 bags, each of 1 kg), medicines 1,335 doses of PPR vaccines, lime (223 bags, each of 20 kg), feeding bowls (552, each of 3.5 lit) and 17 first aid boxes were distributed in the project area. Pantja bucklings were castrated at an early age for delicious meat of wethers. Goat keepers maintained their flocks within shed (64.23%) with kaccha floor (66.67%) and temporary roof (64.23%) during night and allowed grazing from morning to evening (78.86%) on community land. They did not provide manger (55.28%) but provided concentrate (38.21%) from ingredients available at their households.

### **19. Black Bengal Goat Field Unit, ICAR-RCER, Patna, Bihar**

The unit is operational at ICAR-RCER, Patna. All India Coordinated Research Project on Goat Improvement started in ICAR-RCER during the year 2018 with five clusters in different districts of Bihar namely Lohangir of Samastipur, Khairimal of East Champaran, Fatehpur of Araria, Dhubni of Jamui and Baishakha of Katihar. These clusters were selected considering different agro-climatic conditions, density of population and the breeding practices adopted in the tract. The number of households in the selected villages ranged from 32 in Jamui to 210 in East Champaran. Each centre invariably had more than 500 goats from which more than 100 breedable goats were earmarked for selective breeding with genetically superior bucks. Baseline information collected from the project sites revealed that Black Bengal goats existed in three different color variants i.e. Black, White and Brown. However, intermixing of coat colours was very common than the existence single coloured coats. An average flock size was 4.5 with the range of 01 to 49. Lactation length of this breed of goat at farmer's field has been recorded as 80-120 days with average length of  $78.54 \pm 1.36$  days. The mean lactation yield was found to be  $27.10 \pm 3.70$  kg whereas the average milk yield was reported as  $0.34 \pm 0.45$  kg in the breeding tract. The kidding percentage was recorded as  $1.56 \pm 0.36$ . The single kidding was recorded at  $31.62 \pm 0.73$ , twinning  $46.31 \pm 0.22$  and triplets  $18.54 \pm 0.18\%$  in different clusters. The quadruplet was observed only at 3.53% of total kidding. Pneumonia and Diarrhoea was the main reason for mortality in different clusters. Total mortality was recorded at  $24.66 \pm 1.08\%$ , out of which 32.16 and 12.65% was due to Pneumonia and Diarrhoea, respectively. The incidence was more or less similar in all the clusters except in Katihar and Araria districts where mortality was observed higher than the other clusters. Based on the growth at 3 months of age and the performance of buck, 15 male kids were selected from the breeding tract. From these kids, three kids were distributed to the promising goat farmers found in each cluster. The does and bucks in the breeding tract were partially ear-tagged. A total of 1521 goats were dewormed, 560 goats were vaccinated against FMD and 1056 goats were given Enterotoxemia and PPR vaccines. Apart from this, 100 kg mineral mixture was distributed among selected farmers as a part of improving the performance of reproduction in the goats. In order to improve the fodder availability in the selected locations, 3000 number Hybrid Napier root slips were issued to the farmers along with cultivation practices. On an average, the farmers could get 20 to 60 per cent of their



household income through goat rearing in the project locations. A total of 10 Animal Health Camps and 5 Awareness Programme were conducted during the period in the project locations. Three days training programme on “Modern Techniques in Goat Farming” was organized.

## **20. Bundelkhandi Goat Field Unit, IGFRI, Jhansi, Uttar Pradesh**

The unit is operational from May, 2018 at ICAR-Indian Grassland and Fodder Research Institute, Jhansi. During this year (2018-19), it has been initiated in 3 villages, Bajni and Parasari of Datia district (MP) and Palinda of Jhansi district (UP) with a total of 58 households/farmers and 978 goats. The goats under field conditions are mostly kept on extensive system of management. A Bundelkhandi goat is black in colour with medium to large sized and compact body. Morphological characterization indicated that average body length, height, chest girth and paunch girth in males were 70.42, 75.42, 82.14 and 92.71 cm, respectively. In females, the corresponding values were 61.60, 67.10, 74.30 and 85.40 cm, respectively. Average body weights at birth, 3 month, 6 month, 9 month and 12 month were 2.62, 9.83, 13.09, 16.37 and 19.75 kg, respectively. Average daily milk yield was 0.628 kg. Average kidding rate was also found as 1.20. The singlet and twinning percentage was recorded as 80 and 20%, respectively. The selected animals of adopted villages were provided with health coverage under field conditions, namely vaccination against PPR (606 animals), ET (500 animals), FMD (250 animals) and deworming against endo-parasites (770 animals) after analysis of faecal samples, besides periodic treatment (189 cases) of animals suffering from different diseases/ sickness. Collaboration with State Animal Husbandry Department to ensure better health coverage and treatment of sick animals. Groundnut (*Arachis hypogaea*) haulms were introduced as a strategic supplementary feed during winter season when there was scarcity of grazing resources under extensive system of management and animals used to suffer from cold stress. A total of three capacity building/training programmes were organized where 112 farmers were trained/ informed about importance of conserving local black Bundelkhandi goats and scientific goat rearing including health management practices for better profit and livelihood contributions.

## **21. Beetal Field Unit, Guru Angad Dev Veterinary & Animal Sciences University, Ludhiana, Punjab**

Beetal Field unit is operational at GADVASU, Ludhiana, Punjab. One village Bhundri in Ludhiana district was adopted for implementation of technical programme of AICRP-GI on Beetal goats. Bhundri is a village in Sidhwan Bet Tehsil in Ludhiana District of Punjab State, India. It is located 33 KM towards west from District head-quarters Ludhiana. Selected goat farmers were sensitized about various goat management practices with special emphasis on morphological characterization of Beetal does and bucks through supply of pamphlets. Information about periodic farm operations and economics was also provided to the goat farmers through brief literature as well as lectures. Farmers were also familiarized with various development activities to be conducted as per mandate of the AICRP on Goat Improvement Programme in the Bhundri village. Body measurements of

the Beetal goats were recorded and as farmers were reluctant to allow tagging initially due to decrease in market value of such goats during festive occasions, ribbons with identification tags were tied on the goats for periodic monitoring of growth and other performance attributes. Eleven households engaged in goat rearing activities were identified with total goat population of 465 heads having average flock size of about 42 heads. Goats with predominant morphological traits of Beetal breed were identified and ribbons with tag numbers were applied for identification and periodic monitoring of performance traits as per mandate of the programme. Mean height of adult Beetal bucks and does in the selected area was  $89 \pm 4.3$  cm and  $78 \pm 2.6$  cm, respectively. Mean body length and body weight of adult Beetal bucks and does were  $86 \pm 5.3$ ,  $77 \pm 2.4$  cm and  $55 \pm 3.2$ ,  $41 \pm 1.9$  kg, respectively. Average body condition score (BCS) of Beetal bucks and does was  $2.5 \pm 0.2$  and  $2.3 \pm 0.1$  in the selected area. Two trainings were conducted at Guru Angad Dev Veterinary & Animal Sciences University, Ludhiana on goat farming practices with 14 participants. One training activity was also organized in Bhundri village itself. Farmers were sensitized about characterization of Beetal does and bucks through supply of pamphlets in local language for better understanding of the farmers. Information about periodic farm operations for goat rearing and estimation of economics of goat farming was also provided to the goat farmers through brief literature as well as lectures. Selected goat farmers were familiarized about identification and selection of Beetal goats of various categories based on typical morphological features. Farmers were also sensitized about participation of Beetal goats in district and national livestock championships being organized in Punjab state. Farmers were also familiarized with judging criteria for selection on Beetal goats and common defects to be considered while selecting the animal for participation in judging competitions.



**Table 5: Monitoring & Evaluation of AICRP on Goat Improvement Units (Kisan Kalyan Abhiyan under TSP programme)**

<b>S. No.</b>	<b>Details of Kisan Kalyan Abhiyan</b>	
1.	Muniguda -Raygada (district), Odisha	18-19 June, 2018
2.	Kandhamal/Rayagada (Odisha)	9-10 December, 2018
3.	Jirabadi, Odisha	26 February, 2019
4.	<ul style="list-style-type: none"> <li>❖ Kalahandi Bhubaneshwar (Orissa)</li> <li>❖ Farmers awareness programme on scientific goat farming organized by Gopal Biotech Agro Farm, Kendupali, Bargarh. <ul style="list-style-type: none"> <li>• Vaccination camp at Badakhairmal</li> <li>• Improvement programme on Ganjam goat</li> </ul> </li> </ul>	28 February, 2019 to 2 March, 2019
5.	Deoghar (district), Santhal Pargana, Ranchi	27-28 October, 2018
6.	Purola (district), Uttarakhand	10-11 March, 2019
7.	Agali, Attappady, Kerala	26-27 February, 2019
8.	Goreswar, Baksa, Assam	13-14 March, 2019
9.	Palojori Block, Village – Jaynagra and Gaddi of Deoghar District, Ranchi Jharkhand	11-13 February, 2019
10.	Gadchiroli, Maharashtra	1-2 March, 2019
11.	Dhadgaon, Nandurbar, Maharashtra	26-17 September, 2018

# KISAN KALYAN ABHIYAN UNDER TSP PROGRAMME

## Agali, Attappady, Kerala



Dr. Thirupathy, PI addressing the farmers



Inaugural session of training programme



Distribution of stationeries



Distribution of Mineral Mixture and Dewormers to the beneficiaries

## Goreswar, Baksa, Assam



Distribution of Mineral Mixture



Addressing the farmers



Training programme



Health camp

# KISAN KALYAN ABHIYAN UNDER TSP PROGRAMME

## Kalahandi, Odisha



Buck Distribution



Inaugural programme



Interaction with Farmers



Training Camp

## Leh



Female farmers during training programme



Demonstration of feed preparation



Lecture Session



Technology Demonstration

# KISAN KALYAN ABHIYAN UNDER TSP PROGRAMME

## Muniguda, Rayagada, Odisha



Health Camp



Demonstration and Discussion



Buck Distribution



Interaction with Farmers

## Nandurbar, Maharashtra



Health Camp



Training Programme



Mineral mixture and certificates distribution



Vaccination

## 2.2 RESEARCH EVALUATION: 2018-19

1. Project Coordinating Unit, CIRG, Mathura				
Dr. P. K. Rout, Principal Scientist (AGB) & Incharge, AICRP on Goat Improvement				
Activity assigned and targets fixed for each activity during the period	Activity carried out during the period	Gaps/constraints	Future programme identifying the activities, time line and targets for each of the activity	Remarks
<ul style="list-style-type: none"> <li>• Evaluation of Ganjam, Assam goat and Marwari field units</li> <li>• Preparation of different format for PC Report</li> <li>• Preparation of SFC for 2017- 2020</li> <li>• PC Report preparation</li> <li>• Organization of Annual Review Meet &amp; submission of report proceedings</li> <li>• Six monthly target &amp; achievement</li> <li>• Preparation of AICRP report since inception</li> <li>• DNA data base and milk protein genotype</li> <li>• Preparation of formats and SOP for different</li> <li>• Compilation of success story</li> <li>• TSP detail and release of fund.</li> <li>• PFMS Operational for all the units.</li> </ul>	<ul style="list-style-type: none"> <li>• Monitoring and evaluation Ganjam, Gaddi, Assam and Ranchi units</li> <li>• Format for Annual report, presentation</li> <li>• AUC, Specified target &amp; achievement, monthly TSP report along with other necessary format for data recording has been developed &amp; circulated among the units.</li> <li>• SFC for the period of 2017-2020 has been submitted to the council.</li> <li>• Outcome evaluation of project 2017-2020.</li> <li>• Preparation of participating committee report</li> <li>• Preparation of AICRP evaluation report from inception and presentation in the meeting</li> <li>• DNA database &amp; milk protein genotyping has been started.</li> <li>• Financial utilization for 2012-2017.</li> <li>• Release of fund to every unit within 3 days after receiving fund</li> </ul>	<ul style="list-style-type: none"> <li>• PFMS no operational for each unit.</li> <li>• Database updating and online monitoring of progress.</li> <li>• Fund not adequate to fulfill the demand of different unit.</li> </ul>	<ul style="list-style-type: none"> <li>• PC Report preparation</li> <li>• Organization of Annual Review Meet &amp; submission of report</li> <li>• Six monthly target &amp; achievement</li> <li>• Release of fund to every unit.</li> <li>• TSP report</li> <li>• Organization of Kisan Kalyan Abhiyan program in tribal area.</li> <li>• Evaluation &amp; monitoring of each unit.</li> <li>• Statistical data analysis.</li> <li>• Publication of research report.</li> </ul>	



# MONITORING BY PC UNIT



**Exposure Visit Women Farmers from Assam**



**Farmer centric distribution at Vallabh Nagar, Rajasthan**



**Visit of Director (CIRG) and VC (Bihar Veterinary University)**



**Visit to Uttarakhand Goat Field Unit**



**Visit of Project co-ordinator and distribution of feed supplements Tanus Cluster**



**Monitoring at Osmanabadi Unit**

# ANDAMAN GOAT UNIT CIARI, PORT BLAIR



*Buck Distribution to farmers*



*Scientific goat farming training*



*Identification of Anemia in goat*



*Vaccination for deworming*



*Awareness Programme*



*Lecture on scientific goat farming*

**2. Andaman Goat Field Unit, ICAR-CIARI, Port Blair, A & N Island**  
 PI - Dr. Jai Sunder, Principal Scientist (Microbiology)  
**PC's evaluation: (70-80%)**

Activity assigned and targets fixed for each activity during the period	Activity carried out during the period	Gaps/constraints /shortfalls/excesses and reasons thereof, if any	Future programme identifying the activities, timeline and targets for each of the activity	Remarks
<p><b>Performance Recording</b></p> <ul style="list-style-type: none"> <li>• Performance recording of production &amp; reproduction trait in the adopted villages</li> <li>• Distribution of selected buck for genetic improvement.</li> <li>• Data analysis &amp; interpretation</li> </ul> <p><b>GMIS Data upload</b></p> <p><b>Technology developed</b></p> <ul style="list-style-type: none"> <li>• Demonstration of technologies in the farmer's field</li> </ul> <p><b>Technology transfer</b></p> <ul style="list-style-type: none"> <li>• Field demonstration/ Health Camp/ Exposure Visit/ Literature Provided/Goshti/ Meeting Conducted</li> </ul> <p><b>Capacity Building</b></p> <ul style="list-style-type: none"> <li>• Providing skills to farmers for scientific goat farming.</li> </ul> <p><b>Publication</b></p> <ul style="list-style-type: none"> <li>• Paper/Article/Abstract/ Book/ Leaflet pamphlet</li> </ul> <p><b>Linkage created</b></p> <p><b>Other prioritized activities</b></p>	<ul style="list-style-type: none"> <li>• A total of 155 goats were added as new registration, 836 added as new birth.</li> <li>• During the year a total of 336 new farmers were registered under the project in all the clusters.</li> <li>• The overall population growth was 88.5%.</li> <li>• During the year a total of 17 superior bucks were distributed to different villages of Nimbudera and Baratang clusters.</li> <li>• The mortality was 4.52 %.</li> <li>• A herbal based lotion for control of external ticks was developed</li> <li>• A total of 09 trainings and 202 farmers were benefitted.</li> <li>• 65 leaflets on scientific goat farming and Andaman local goat were distributed.</li> <li>• Net income per animal per year was found to be Rs. 5972.50.</li> </ul>	<ul style="list-style-type: none"> <li>• Technology adoption rate.</li> <li>• Research publication.</li> <li>• Average daily gain need to be analysed.</li> <li>• Doe productivity in each cluster.</li> <li>• Clusters are now established and number of breeding bucks should be distributed and rotated also.</li> <li>• Milk reading should be recorded.</li> <li>• Check the heritability of 9 month body weight and indicate the sample size.</li> <li>• Indicate the number of buck, doe and progeny for genetic trend estimation.</li> </ul>	<ul style="list-style-type: none"> <li>• Selection of clusters &amp; farmers and Registration of adult doe (No. of animals) = 2000 per year</li> <li>• Animal Identification, pedigree and performance recording (No. of animals) = 1000 per year</li> <li>• Selection of male kids and distribution for breeding purpose (No. of animals) = 20-25 per year</li> <li>• Health Coverage with vaccination and deworming etc. (No. of animals) = 2000 per year</li> <li>• Capacity building of goat keepers and stakeholders (No. of trainings) = 4-8 per year</li> <li>• Field demonstration/ Health Camp/ Exposure Visit/ Seasonal Advisory/ Literature Provided/ Goshti/Meeting Conducted/ General Awareness Created (No. of trainings/camp to be organize) = 10 per year</li> </ul>	

### 3. Assam Hill Goat Field Unit, AAU, Khanpara, Guwahati, Assam

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

PC's Evaluation: (70-80%)

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, timeline and targets for each of the activity	Remarks
<p><b>Performance Recording</b></p> <ul style="list-style-type: none"> <li>• Performance recording of production &amp; reproduction trait in the adopted villages</li> <li>• Distribution of selected buck for genetic improvement.</li> <li>• Data analysis &amp; interpretation</li> </ul> <p><b>GMIS Data upload</b></p> <p><b>Technology developed</b></p> <ul style="list-style-type: none"> <li>• Demonstration of technologies in the farmer's field</li> </ul> <p><b>Technology transfer</b></p> <ul style="list-style-type: none"> <li>• Field demonstration/ Health Camp/ Exposure Visit/ Literature Provided/Goshti/ Meeting Conducted</li> </ul> <p><b>Capacity Building</b></p> <ul style="list-style-type: none"> <li>• Providing skills to farmers for scientific goat farming.</li> </ul> <p><b>Publication</b></p> <ul style="list-style-type: none"> <li>• Paper/Article/ Abstract/Book/ Leaflet pamphlet</li> </ul> <p><b>Linkage created</b></p> <p><b>Other prioritized activities</b></p>	<ul style="list-style-type: none"> <li>• A total of 37 new beneficiaries and 311 new goats have been registered under the project for the report period.</li> <li>• The population growth of 100.89 % in the adopted field units.</li> <li>• The average mortality rate was 5.51%</li> <li>• 11 bucks were exchanged among the five field units.</li> <li>• Twelve (12) awareness-cum training camps have been organized.</li> <li>• A two days program under tribal sub plan (TSP) was organized in Baksa, a tribal district of Assam.</li> <li>• Twenty nine vaccination camps to immunize 12083 animals, 31 deworming camps to deworm 5351 animals and 33 treatment camps to treat 5297 animals were organised</li> <li>• 809 goats were sold by the beneficiaries with a total income of Rs. 14, 52,225.00.</li> </ul>	<ul style="list-style-type: none"> <li>• Sample size should be more for milk recording.</li> <li>• Genetic trend estimation.</li> <li>• Body weight during the year should be mention.</li> <li>• Buck distribution should be reported cluster wise.</li> <li>• Farmer centric incentives should be provided.</li> <li>• Heritability should have been reported.</li> <li>• Check the phenotypic, genetic trend of body weight at different age.</li> </ul>	<ul style="list-style-type: none"> <li>• Selection of clusters &amp; farmers and Registration of adult doe (No. of animals) = 2000 per year</li> <li>• Animal Identification, pedigree and performance recording (No. of animals) = 1000 per year</li> <li>• Selection of male kids and distribution for breeding purpose (No. of animals) = 20-25 per year</li> <li>• Health Coverage with vaccination and deworming etc. (No. of animals) = 2000 per year</li> <li>• Capacity building of goat keepers and stake holders (No. of trainings) = 4-8 per year</li> <li>• Field demonstration/ Health Camp/ Exposure Visit/ Seasonal Advisory/ Literature Provided/ Goshti/Meeting Conducted/ General Awareness Created (No. of trainings/camp to be organize) = 6 per year</li> </ul>	<ul style="list-style-type: none"> <li>• Mortality due to flood</li> <li>• Disease occurs due to flood.</li> </ul>

# AASAM HILL GOAT UNIT AAU. KHANPARA, GUWAHATI, ASSAM



*Feed Distribution*



*Buck distribution*



*Training on Goat Farming*



*Awareness camp*



*Exposure at CIRG*



*Goat rally on judging*

# BARBARI GOAT FARM UNIT ICAR-CIRG, MAKHDOOM, UTTAR PRADESH



*Visit Hon'ble Secretary ICAR to  
Barbari Goat Farm*



*Animals feeding at farm unit*



*Milk feeding to kid*



*Bucks at farm shed*



*Feeding at farm*



*Barbari flock*

**4. Barbari Goat Farm Unit, ICAR-CIRG, Makhdoom, Uttar Pradesh**  
 PI- Dr. M. K. Singh, Principal Scientist (AG&B)  
**PC's evaluation: (80-90%)**

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, timeline and targets for each of the activity	Remarks
<p><b>Performance Recording</b></p> <ul style="list-style-type: none"> <li>• Performance recording of production &amp; reproduction trait in the adopted villages</li> <li>• Distribution of selected buck for genetic improvement.</li> <li>• Data analysis &amp; interpretation</li> </ul> <p><b>GMIS Data upload</b></p> <p><b>Technology developed</b></p> <ul style="list-style-type: none"> <li>• Demonstration of technologies in the farmer's field</li> </ul> <p><b>Technology transfer</b></p> <ul style="list-style-type: none"> <li>• Field demonstration/ Health Camp/ Exposure Visit/ Literature Provided/ Goshti/ Meeting Conducted</li> </ul> <p><b>Capacity Building</b></p> <ul style="list-style-type: none"> <li>• Providing skills to farmers for scientific goat farming.</li> </ul> <p><b>Publication</b></p> <ul style="list-style-type: none"> <li>• Paper/Article/Abstract / Book/Leaflet pamphlet</li> </ul> <p><b>Linkage created Other prioritized activities</b></p>	<ul style="list-style-type: none"> <li>• The population growth, kidding efficiency, kidding rate (litre size) were 123%, 115.5, 1.40, respectively.</li> <li>• Overall flock mortality was 3.2%.</li> <li>• Supplied 259 goats (173 male and 86 females) to different stake holders.</li> <li>• Milk production of unit was 11910 litre</li> <li>• 32 multiplier flocks established up to March, 2019 and five new farm added in 2018-19 in (Haryana, Bundelkhand, Uttrakhand, Rajasthan, Bihar, Karnataka and UP.</li> <li>• 22 consortium multiplier flocks were created by 4 multiplier flocks based at Karnal, Vrandavan, Dholpur and Barabanki. Number of Barbari goats at such farms was ranged 24 to 356.</li> <li>• The milk Yield at 90 and 140days was 71.08±1.55 and 97.49±1.98, respectively.</li> <li>• Published two research paper, four lead papers, three success stories, three technical/popular articles, three training manual and nine book manual chapters.</li> </ul>	<ul style="list-style-type: none"> <li>• Selection of males and breeding plan need to be finalized</li> <li>• Genetic progress at 9 month and 12 month of age need to be analysed.</li> <li>• Genetic progress of 90 days and 140 days milk need to be analysed.</li> <li>• Animal model effect on body growth.</li> <li>• Check the heritability of 9 month body weight and indicate the sample size.</li> <li>• Indicate the number of buck, doe and progeny for genetic trend estimation.</li> </ul>	<ul style="list-style-type: none"> <li>• Selection of clusters &amp; farmers and Registration of adult doe (No. of animals) = 2000 per year</li> <li>• Animal Identification, pedigree and performance recording (No. of animals) = 1000 per year</li> <li>• Selection of male kids and distribution for breeding purpose</li> <li>• (No. of animals) = 20-25 per year</li> <li>• Health Coverage with vaccination and deworming etc. (No. of animals) = 2000 per year</li> <li>• Capacity building of goat keepers and stake holders (No. of trainings) = 4-8 per year</li> <li>• Semen doses cryo-preserved for in situ / ex situ conservation of important breeds (No.) = 1000 per year</li> <li>• Field demonstration/ Health Camp/ Exposure Visit/ Seasonal Advisory/ Literature Provided/ Goshti/Meeting Conducted/ General Awareness Created (No. of trainings/camp to be organize) = 5 per year</li> </ul>	

**5. Black Bengal Goat Field Unit, BAU, Kanke, Ranchi, Jharkhand**

PI- Dr. Sushil Prasad (LPM)

PC's Evaluation: (60-70%)

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, timeline and targets for each of the activity	Remarks
<p><b>Performance Recording</b></p> <ul style="list-style-type: none"> <li>• Performance recording of production &amp; reproduction trait in the adopted villages</li> <li>• Distribution of selected buck for genetic improvement.</li> <li>• Data analysis &amp; interpretation</li> </ul> <p><b>GMIS Data upload</b></p> <p><b>Technology developed</b></p> <ul style="list-style-type: none"> <li>• Demonstration of technologies in the farmer's field</li> </ul> <p><b>Technology transfer</b></p> <ul style="list-style-type: none"> <li>• Field demonstration/ Health Camp/ Exposure Visit/ Literature Provided/Goshti/ Meeting Conducted</li> </ul> <p><b>Capacity Building</b></p> <ul style="list-style-type: none"> <li>• Providing skills to farmers for scientific goat farming.</li> </ul> <p><b>Publication</b></p> <p>Paper/Article/ Abstract/ Book/Leaflet pamphlet</p> <p><b>Linkage created</b></p> <p><b>Other prioritized activities</b></p>	<ul style="list-style-type: none"> <li>• 40 new Bucks distributed among the farmers at four centers of the project.</li> <li>• Kidding rate (litter size) of Black Bengal goat was estimated as 1.39 with 170% kidding.</li> <li>• Goat farmers were provided Feeder, Waterer, Essential Medicines and 50 Kg feed.</li> <li>• Vaccinated with PPR, dipping and deworming have been done. Mortality was reduced up to 2.41 percent at the farmer flock.</li> <li>• A One day training- 174, Three day training – 50, Ten day training – 40, Exposure visit- 02 and capacity building - 02 (twenty five farmers in each group) at Small Ruminant Instructional Farm, R.V.C Kanke and centers for farmers of all the centers.</li> </ul>	<ul style="list-style-type: none"> <li>• Indicate the number of buck, doe and progress for genetic trend establishment.</li> <li>• No improvement in weaning weight and package of practices for weaning management should be developed.</li> <li>• No research publication.</li> <li>• No. of observations should be mentioned in growth and milk data.</li> <li>• Farmers centric input need to be provided.</li> <li>• Doe productivity of each cluster.</li> <li>• Genetic parameter estimated.</li> <li>• Target and achievement have not been given in quantitative scale.</li> <li>• Heritability should have been estimated and check the number of buck, doe and progeny for genetic trend estimation.</li> <li>• Package of practice for the region should be published.</li> </ul>	<ul style="list-style-type: none"> <li>• Selection of clusters &amp; farmers and Registration of adult doe (No. of animals) = 2000 per year</li> <li>• Animal identification, pedigree and performance recording (No. of animals) = 1000 per year</li> <li>• Selection of male kids and distribution for breeding purpose (No. of animals) = 20-25 per year</li> <li>• Health Coverage with vaccination and deworming etc. (No. of animals) = 2000 per year</li> <li>• Capacity building of goat keepers and stake holders (No. of trainings) = 6 per year</li> <li>• Field demonstration/ Health Camp/ Exposure Visit/ Seasonal Advisory/ Literature Provided/ Goshti/Meeting Conducted/ General Awareness Created (No. of trainings/camp to be organize) = 10 per year</li> </ul>	<ul style="list-style-type: none"> <li>• Please provide the category of Farmers under SC/ST and General Category</li> <li>• Why Malathion is given for treatment. Malathion should not be used for dipping</li> <li>• Details of goat based technologies to be provided.</li> </ul>



# BLACK BENGAL GOAT FIELD UNIT BAU, RANCHI, JHARKHAND



*Buck distribution at center*



*Goat Vaccination*



*Dipping*



*Farmers Training at center under  
Kisan Kalyan Abhiyan*



*Goat feeding at farmer house*



*Distribution of Mineral Mixture*

# BLACK BENGAL GOAT UNIT WBUV&FS, KOLKATA, WEST BENGAL



*Cuffing of greed fodders for goats*



*Weighing of Goats*



*Buck and Feed distribution to Tribal Farmers*



*Training od SC Farmers*



*Field programme with KVK*



*Distribution of Goat and booklet to Tribal Farmers*

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

PI- Dr. Manorajan Roy, Professor (AG&B)

PC's evaluation: (80-90%)

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, timeline and targets for each of the activity	Remarks
<p><b>Performance Recording</b></p> <ul style="list-style-type: none"> <li>Performance recording of production &amp; reproduction trait in the adopted villages</li> <li>Distribution of selected buck for genetic improvement.</li> <li>Data analysis &amp; interpretation</li> </ul> <p><b>GMIS Data upload</b></p> <p><b>Technology developed</b></p> <ul style="list-style-type: none"> <li>Demonstration of technologies in the farmer's field</li> </ul> <p><b>Technology transfer</b></p> <ul style="list-style-type: none"> <li>Field demonstration/ Health Camp/ Exposure Visit/ Literature Provided/Goshti/ Meeting Conducted</li> </ul> <p><b>Capacity Building</b></p> <ul style="list-style-type: none"> <li>Providing skills to farmers for scientific goat farming.</li> </ul> <p><b>Publication</b></p> <ul style="list-style-type: none"> <li>Paper/Article/ Abstract/Book/ Leaflet pamphlet</li> </ul> <p><b>Linkage created</b></p> <p><b>Other prioritized activities</b></p>	<ul style="list-style-type: none"> <li>The population growth rate of Black Bengal for 2018-19 is 219.47%</li> <li>The kidding rate (litter size) was 1.81%.</li> <li>The mortality rate was 5.50%.</li> <li>20 nos. of deworming camp, 30 nos. of vaccination camp have been organized in adopted villages.</li> <li>29 bucks were distributed in adopted villages.</li> <li>Four success story, four leaflet and 4 research papers have been published.</li> </ul>	<ul style="list-style-type: none"> <li>No. of observation should be mentioned in growth and milk data.</li> <li>ADG need to be analysed.</li> <li>Genetic progress at 9 month and 12 month of age need to be analysed.</li> <li>Cluster wise buck distribution.</li> <li>Milk production record.</li> <li>ADG and FCR need to be analysed in cluster wise.</li> <li>Doe productivity should be presented cluster wise.</li> <li>How prolificacy was calculated.</li> <li>Mass deworming should not be carried out.</li> <li>Kidding rate should tend to be presented cluster wise.</li> <li>Check the heritability of 9 month body weight and indicate the sample size.</li> <li>Indicate the number of buck, doe and progeny for genetic trend estimation.</li> </ul>	<ul style="list-style-type: none"> <li>Selection of clusters &amp; farmers and Registration of adult doe (No. of animals) = 2000 per year</li> <li>Animal Identification, pedigree and performance recording (No. of animals) = 1000 per year</li> <li>Selection of male kids and distribution for breeding purpose (No. of animals) = 20-25 per year.</li> <li>Health Coverage with vaccination and deworming etc. (No. of animals) = 2000 per year</li> <li>Capacity building of goat keepers and stake holders (No. of trainings) = 4-8 per year</li> <li>Field demonstration/ Health Camp/ Exposure Visit/ Seasonal Advisory/ Literature Provided/ Goshute/Meeting Conducted/ General Awareness Created (No. of trainings/camp to be organize) = 10 per year</li> </ul>	

**7. Changthangi Goat Field Unit, SKUAST, Kashmir, Leh-Ladakh, J&K**  
 PI - Dr. Bashir Ahmad, Associate Professor (AG&B)  
**PC'S evaluation: (50-60%)**

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, timeline and targets for each of the activity	Remarks
<p><b>Performance Recording</b></p> <ul style="list-style-type: none"> <li>• Performance recording of production &amp; reproduction trait in the adopted villages</li> <li>• Distribution of selected buck for genetic improvement.</li> <li>• Data analysis &amp; interpretation</li> </ul> <p><b>GMIS Data upload</b></p> <p><b>Technology developed</b></p> <ul style="list-style-type: none"> <li>• Demonstration of technologies in the farmer's field</li> </ul> <p><b>Technology transfer</b></p> <ul style="list-style-type: none"> <li>• Field demonstration/ Health Camp/ Exposure Visit/ Literature Provided/Goshti /Meeting Conducted</li> </ul> <p><b>Capacity Building</b></p> <ul style="list-style-type: none"> <li>• Providing skills to farmers for scientific goat farming.</li> </ul> <p><b>Publication</b></p> <ul style="list-style-type: none"> <li>• Paper/Article/Abstract/ Book/Leaflet pamphlet</li> </ul> <p><b>Linkage created</b></p> <p><b>Other prioritized activities</b></p>	<ul style="list-style-type: none"> <li>• The population growth was 52.24%.</li> <li>• A total of 12 improved bucks were distributed to farmers.</li> <li>• The overall mortality rate was 3.84%.</li> <li>• Health coverage under migratory field conditions viz. Deworming (1890 goats) and dipping (3569 goats), ET, H.S. and FMD each 395 goat, coccidiosis 5432 for goats have done.</li> <li>• 5 trainings were organized this year at HMMARI including trainings on Scientific Goat management.</li> <li>• Pashmina Shawl Brand “Changthang Pashmina” (27 shawls) developed using pure pashmina fibre and is available for sale from Changthangi goat of Kharnak, Samad and Korzok Cluster.</li> <li>• First time organic Changthangi sheep and goat meat and dried goat cheese developed.</li> <li>• RFID tagging was introduced for identifying superior germplasm for the first time in Ladakh.</li> </ul>	<ul style="list-style-type: none"> <li>• Genetic parameter estimation of fiber yield should be carried out.</li> <li>• Buck distribution has not been carried out as per requirement.</li> <li>• Growth data should be given in proper format (mean±SE)</li> <li>• Research publication not provided.</li> <li>• No. of farmer added during the year should be carried out.</li> <li>• Milk data recording should be carried out.</li> </ul>	<ul style="list-style-type: none"> <li>• Selection of clusters &amp; farmers and Registration of adult doe (No. of animals) = 2000 per year</li> <li>• Animal Identification, pedigree and performance recording (No. of animals) = 1000per year</li> <li>• Selection of male kids and distribution for breeding purpose (No. of animals) = 20-25 per year</li> <li>• Health Coverage with vaccination and deworming etc. (No. of animals) = 2000 per year</li> <li>• Capacity building of goat keepers and stake holders (No. of trainings) = 5 per year</li> <li>• Field demonstration/ Health Camp/ Exposure Visit/ Seasonal Advisory/ Literature Provided/ Goshti/Meeting Conducted/ General Awareness Created (No. of trainings/camp to be organize) = 6 per year</li> </ul>	

# CHANGTHANGI GOAT FIELD UNIT SKUAST, KASHMIR, LEH-LADAKH, J&K



*Unit Stalls at Kisan Mela DIHAR Leh*



*Changthangi Goat Meat*



*Training and Distribution of medicines among the beneficiaries*



*Changthangi Kids*



*Activities at Animal Health Camp*



*Changthangi Buck*

# GADDI GOAT FIELD UNIT HPKVV, PALAMPUR, HIMACHAL PRADESH



*Data recording at higher hills*



*Gaddi farmers exposure visit at Jamunapari farm, CIRG, Makhdoom*



*Registered Farmers provided with Feed input*



*Registered farmers provided with breeding bucks input*



*Tagging in Goats*



*Body weight recording*

**8. Gaddi Goat Field Unit, HPKVV, Palampur, Himachal Pradesh**

PI- Dr. P.K. Dogra, Professor (AG&B)

**PC'S evaluation: (70-80%)**

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, timeline and targets for each of the activity	Remarks
<p><b>Performance Recording</b></p> <ul style="list-style-type: none"> <li>• Performance recording of production &amp; reproduction trait in the adopted villages</li> <li>• Distribution of selected buck for genetic improvement.</li> <li>• Data analysis &amp; interpretation</li> </ul> <p><b>GMIS Data upload</b></p> <p><b>Technology developed</b></p> <ul style="list-style-type: none"> <li>• Demonstration of technologies in the farmer's field</li> </ul> <p><b>Technology transfer</b></p> <ul style="list-style-type: none"> <li>• Field demonstration/ Health Camp/ Exposure Visit/ Literature Provided/Goshti/ Meeting Conducted</li> </ul> <p><b>Capacity Building</b></p> <ul style="list-style-type: none"> <li>• Providing skills to farmers for scientific goat farming.</li> </ul> <p><b>Publication</b></p> <ul style="list-style-type: none"> <li>• Paper/Article/Abstract/ Book/Leaflet pamphlet</li> </ul> <p><b>Linkage created</b></p> <p><b>Other prioritized activities</b></p>	<ul style="list-style-type: none"> <li>• The population growth was 108.55%.</li> <li>• The kidding percent of the flocks was 1.23.</li> <li>• A total of 30 males were distributed to 30 different farmers as a breeding input</li> <li>• Health coverage under migratory field conditions was provided.</li> <li>• The overall mortality rate was 8.10%.</li> <li>• The body weight at 12 month of age was 27.55kg.</li> <li>• Four Field demonstration / health camp, one exposure visit and 6 capacity building training were organized.</li> <li>• Leaflets provided</li> </ul>	<ul style="list-style-type: none"> <li>• A kit should be developed as per requirement of farmers during migration to fulfill the progeny and kidding management.</li> <li>• Genetic parameter estimation.</li> <li>• Milk yield recording should be carried out in more population.</li> <li>• Breeding value of bucks should be reported.</li> </ul>	<ul style="list-style-type: none"> <li>• Selection of clusters &amp; farmers and Registration of adult doe (No. of animals) = 2000 per year.</li> <li>• Animal Identification, pedigree and performance recording (No. of animals) = 1000 per year.</li> <li>• Selection of male kids and distribution for breeding purpose (No. of animals) = 20-25 per year.</li> <li>• Health Coverage with vaccination and deworming etc. (No. of animals) = 2000 per year.</li> <li>• Capacity building of goat keepers and stake holders (No. of trainings) = 6 per year.</li> <li>• Semen doses cryo-preserved for in situ /ex situ conservation of important breeds (No.) = 1000 per year.</li> <li>• Field demonstration/ Health Camp / Exposure Visit / Seasonal Advisory/ Literature provided/ Goshti / Meeting Conducted/ General Awareness Created (No. of trainings/camp to be organize) = 8 per year.</li> </ul>	

**9. Ganjam Goat Field Unit, OUAT, Bhubaneswar, Orissa**  
 PI - Dr. D. K. Karna, Associate Professor (AG&B)  
**PC'S evaluation: (60-70%)**

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, timeline and targets for each of the activity	Remarks
<p><b>Performance Recording</b></p> <ul style="list-style-type: none"> <li>• Performance recording of production &amp; reproduction trait in the adopted villages</li> <li>• Distribution of selected buck for genetic improvement.</li> <li>• Data analysis &amp; interpretation</li> </ul> <p><b>GMIS Data upload</b></p> <p><b>Technology developed</b></p> <ul style="list-style-type: none"> <li>• Demonstration of technologies in the farmer's field</li> </ul> <p><b>Technology transfer</b></p> <ul style="list-style-type: none"> <li>• Field demonstration/ Health Camp/ Exposure Visit/ Literature Provided/Goshti/Meeting Conducted</li> </ul> <p><b>Capacity Building</b></p> <ul style="list-style-type: none"> <li>• Providing skills to farmers for scientific goat farming.</li> </ul> <p><b>Publication</b></p> <ul style="list-style-type: none"> <li>• Paper/Article/ Abstract/ Book/ Leaflet pamphlet</li> </ul> <p><b>Linkage created</b></p> <p><b>Other prioritized activities</b></p>	<ul style="list-style-type: none"> <li>• The population growth for the year was 67.9 percent.</li> <li>• 26 new farmers have been registered</li> <li>• A total of 6598 vaccinations were done against PPR, HS, goat pox and FMD and 9026 deworming dosages were administered.</li> <li>• A total of two training programmes were organized.</li> <li>• The milk yield at 30 days and 60 days were 6.58 ± 1.33Kg and 12.49± 2.44kg respectively.</li> <li>• 33 improved bucks have been distributed.</li> </ul>	<ul style="list-style-type: none"> <li>• Doe productivity needs to be calculated.</li> <li>• More training should be carried out.</li> <li>• Success story and research publication.</li> <li>• ADG need to be analysed.</li> <li>• Population growth should increase in adopted farmers flock.</li> <li>• At least one training programme in tribal area should be conducted.</li> </ul>	<ul style="list-style-type: none"> <li>• Selection of clusters &amp; farmers and Registration of adult doe (No. of animals) = 2000 per year</li> <li>• Animal Identification, pedigree and performance recording (No. of animals) = 1000 per year</li> <li>• Selection of male kids and distribution for breeding purpose (No. of animals) = 20- 25 per year</li> <li>• Health Coverage with vaccination and deworming etc. (No. of animals) = 2000 per year</li> <li>• Capacity building of goat keepers and stake holders (No. of trainings) = 6 per year</li> <li>• Semen doses cryo-preserved for in situ / ex situ conservation of important breeds (No.) = 1000 per year</li> <li>• Field demonstration/ Health Camp/ Exposure Visit/ Seasonal Advisory/ Literature Provided/ Goshti/Meeting Conducted/ General Awareness Created (No. of trainings/camp to be organize) = 10 per year</li> </ul>	



# GANJAM GOAT FIELD UNIT OUAT, BHUBANESHWAR, ODISHA



*Training organized on Scientific Goat Rearing*



*Vaccination camp at Rambha*



*Distribution of superior breeding bucks to the registered farmers at Khallikote*



*Vaccination Camp*



*Distribution of Concentrate feed to the Goat Farmers*



*Participated in "Krishi Orisha 2019" Expo with stall Ganjam Goat on 15-19 Jan. 19*

# HIMALAYAN LOCAL GOAT FIELD UNIT ICAR-IVRI CAMPUS, MUKTESHWAR



*Goat Shelter constructed near cultivable land at Kanara Village*



*Feeding practices of goat*



*Vaccination in goat kids*



*Training of Farmers at Kanara Village*



*Exposure Visit*



*Release of Souvenir during workshop IVRI*

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

PI - Dr. C. K. Jana

PC'S evaluation: (60-70%)

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, timeline and targets for each of the activity	Remarks
<p><b>Performance Recording</b></p> <ul style="list-style-type: none"> <li>• Performance recording of production &amp; reproduction trait in the adopted villages</li> <li>• Distribution of selected buck for genetic improvement.</li> <li>• Data analysis &amp; interpretation</li> </ul> <p><b>GMIS Data upload</b></p> <p><b>Technology developed</b></p> <ul style="list-style-type: none"> <li>• Demonstration of technologies in the farmer's field</li> </ul> <p><b>Technology transfer</b></p> <ul style="list-style-type: none"> <li>• Field demonstration/ Health Camp/ Exposure Visit/ Literature Provided/Goshti/Meeting Conducted</li> </ul> <p><b>Capacity Building</b></p> <ul style="list-style-type: none"> <li>• Providing skills to farmers for scientific goat farming.</li> <li>• <b>Publication</b> Paper/Article/Abstract / Book/Leaflet pamphlet</li> </ul> <p><b>Linkage created</b></p> <p><b>Other prioritized activities</b></p>	<ul style="list-style-type: none"> <li>• The population of growth was 70.93%.</li> <li>• Kidding rate (Litter size) was 1.23.</li> <li>• Two bucks were distributed in one cluster.</li> <li>• The overall mortality during the year 2017-18 was 4.16%</li> <li>• Ten health camps were organized covering 1563 animals.</li> <li>• Six training programme on different aspects of goat production were organized.</li> </ul>	<ul style="list-style-type: none"> <li>• Less no. of buck distributed.</li> <li>• Genetic parameter estimation.</li> <li>• Lactation performance should be reanalyzed.</li> <li>• Base line data not completed.</li> <li>• Buck distribution is less.</li> <li>• Preventive health coverage needs to be provided to more animals.</li> <li>• Check kidding rate and population growth.</li> <li>• Organize more training programme.</li> <li>• Package of practices for the region should be published.</li> </ul>	<ul style="list-style-type: none"> <li>• Selection of clusters &amp; farmers and Registration of adult doe (No. of animals) = 2000 per year</li> <li>• Animal Identification, pedigree and performance recording (No. of animals) = 1000 per year</li> <li>• Selection of male kids and distribution for breeding purpose (No. of animals) = 20-25 per year</li> <li>• Health Coverage with vaccination and deworming etc. (No. of animals) = 2000 per year</li> <li>• Capacity building of goat keepers and stake holders (No. of trainings) = 6 per year</li> <li>• Semen doses cryo-preserved for in situ / ex situ conservation of important breeds (No.) = 1000 per year</li> <li>• Field demonstration/ Health Camp/ Exposure Visit/ Seasonal Advisory/ Literature Provided/ Goshti/Meeting Conducted/ General Awareness Created (No. of trainings/camp to be organize) = 10 per year</li> </ul>	

**11. Jamunapari Goat Farm Unit , ICAR-CIRG, Makhdoom, Uttar Pradesh**

PI- Dr. M. S. Dige, Scientist (AG&B)

**PC'S evaluation: (80-90%)**

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, timeline and targets for each of the activity	Remarks
<p><b>Performance Recording</b></p> <ul style="list-style-type: none"> <li>• Performance recording of production &amp; reproduction trait in the adopted villages</li> <li>• Distribution of selected buck for genetic improvement.</li> <li>• Data analysis &amp; interpretation</li> </ul> <p><b>GMIS Data upload</b></p> <p><b>Technology developed</b></p> <ul style="list-style-type: none"> <li>• Demonstration of technologies in the farmer's field</li> </ul> <p><b>Technology transfer</b></p> <ul style="list-style-type: none"> <li>• Field demonstration/ Health Camp/ Exposure Visit/ Literature Provided/Goshti/Meeting Conducted</li> </ul> <p><b>Capacity Building</b></p> <ul style="list-style-type: none"> <li>• Providing skills to farmers for scientific goat farming.</li> </ul> <p><b>Publication</b></p> <ul style="list-style-type: none"> <li>• Paper/Article/Abstract/ Book/ Leaflet pamphlet</li> </ul> <p><b>Linkage created</b></p> <p><b>Other prioritized activities</b></p>	<ul style="list-style-type: none"> <li>• Birth weight recording was carried out in 284 kids.</li> <li>• 90 days milk yield recording was carried out in 128 does.</li> <li>• The population growth of the flocks was 92.9%.</li> <li>• A total of 284 kids born during the year.</li> <li>• The nucleus herd is maintaining about 294 breedable adult does.</li> <li>• The overall mortality of the flock during the year 2018-19 was 6.16 % and annual culling rate was 8.48 %.</li> <li>• 53 improved animals were distributed to goat breeders.</li> <li>• 1 research articles has been published and 1 has been accepted. One abstract has been published in national seminar.</li> <li>• Breeding efficiency &amp; kidding percent on the basis of does selected for breeding were 84.27 % and 122.4 %, respectively</li> <li>• The kidding rate was 1.36.</li> </ul>	<ul style="list-style-type: none"> <li>• Success story documentation in field conditions.</li> <li>• Improved germ plasm number is less.</li> <li>• Multiplier flock adoption.</li> </ul>	<ul style="list-style-type: none"> <li>• Selection of clusters &amp; farmers and registration of adult doe ( No. of animals) = 2000 per year</li> <li>• Animal identification, pedigree and performance recording (No. of animals) = 1000 per year</li> <li>• Selection of male kids and distribution for breeding purpose (No. of animals) = 20- 25 per year</li> <li>• Health Coverage with vaccination and deworming etc. (No. of animals) = 2000 per year</li> <li>• Semen doses cryo-preserved for in situ / ex situ conservation of important breeds (No.) = 1000 per year</li> <li>• Multiplier flock formation.</li> </ul>	

# JAMUNAPARI GOAT FARM UNIT ICAR-CIRG, MAKHDOOM, UTTAR PRADESH



*New kids at Jamunapari Goat farm Unit*



*Visit of P.Thanguraju Pro. Chancellor, SRM, Institute*



*Vaccination in goat kids*



*Measurement of body growth*



*Jamunapari grazing flock*



*Visit of Sh./Dr. Sushil Kumar, Secretary*

# MALABARI GOAT FARM UNIT KV&ASU, MANNUTHY, THRISSUR, KERALA



*Vaccination Camp*



*Buck distribution*



*Vaccination camp at Attapaddy Malabari unit*



*Incharge, Project Co-ordinator and PI distributed feed supplements at Malabari unit*



*Exposure visit of farmers and feed supply*



*Training to farmers Perambra cluster*

**12. Malabari Goat Field Unit, KV&ASU, Mannuthy, Thrissur, Kerala**  
 PI - Dr. Thirupathy Venkatechalapathy, Assistant Professor (AG&B)  
**PC'S evaluation: (70-80%)**

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, timeline and targets for each of the activity	Remarks
<p><b>Performance Recording</b></p> <ul style="list-style-type: none"> <li>• Performance recording of production &amp; reproduction trait in the adopted villages</li> <li>• Distribution of selected buck for genetic improvement.</li> <li>• Data analysis &amp; interpretation</li> </ul> <p><b>GMIS Data upload</b></p> <p><b>Technology developed</b></p> <ul style="list-style-type: none"> <li>• Demonstration of technologies in the farmer's field</li> </ul> <p><b>Technology transfer</b></p> <ul style="list-style-type: none"> <li>• Field demonstration/ Health Camp/ Exposure Visit/ Literature Provided/Goshti/Meeting Conducted</li> </ul> <p><b>Capacity Building</b></p> <ul style="list-style-type: none"> <li>• Providing skills to farmers for scientific goat farming.</li> </ul> <p><b>Publication</b></p> <ul style="list-style-type: none"> <li>• Paper/Article/ Abstract/Book/ Leaflet pamphlet</li> </ul> <p><b>Linkage created</b></p> <p><b>Other prioritized activities</b></p>	<ul style="list-style-type: none"> <li>• The population growth was 88.30%.</li> <li>• 17 superior bucks have been distributed to farmers for breeding.</li> <li>• The kidding rate was 1.69%.</li> <li>• Mortality rate was reduced to below 3.30%.</li> <li>• 5 hands on training with 2 days duration to 74 farmers, 4 field trainings to 132 farmers and 29 on-farm class of 2-3 hours to 750 farmers were organized.</li> <li>• Technologies for FAMACHA eye colour chart, Probiotic goat milk ice cream, and model goat shed for 20 goats for high rain fall area were developed.</li> <li>• Published 4 research papers, 2 popular lead article, 3 leaflets/pamphlets, 1 book in local language and presented 9 technical papers.</li> </ul>	<ul style="list-style-type: none"> <li>• Base line data collection should continue.</li> <li>• Population growth is less.</li> <li>• No. of observation should be mentioned for growth and milk data in tables.</li> <li>• Registered farmers number should increase in each cluster.</li> <li>• Population growth should be checked as kidding rate is high.</li> <li>• Genetic trend parameter was for body weight at all age group.</li> </ul>	<ul style="list-style-type: none"> <li>• Selection of clusters &amp; farmers and Registration of adult doe (No. of animals) = 2000 per year</li> <li>• Animal Identification, pedigree and performance recording (No. of animals) = 1000 per year</li> <li>• Selection of male kids and distribution for breeding purpose (No. of animals) = 20-25 per year</li> <li>• Health Coverage with vaccination and deworming etc. (No. of animals) = 2000 per year</li> <li>• Capacity building of goat keepers and stake holders (No. of trainings) = 6 per year</li> <li>• Semen doses cryo-preserved for in situ / ex situ conservation of important breeds (No.) = 1000 per year</li> <li>• Field demonstration/ Health Camp/ Exposure Visit/ Seasonal Advisory/ Literature Provided/ Goshti/Meeting Conducted/ General Awareness Created (No. of trainings/camp to be organize) = 10 per year</li> </ul>	

**13. Marwari Goat Field Unit, RAJUVAS, Bikaner, Rajasthan**

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

PC'S evaluation: (70-80%)

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, timeline and targets for each of the activity	Remarks
<p><b>Performance Recording</b></p> <ul style="list-style-type: none"> <li>• Performance recording of production &amp; reproduction trait in the adopted villages</li> <li>• Distribution of selected buck for genetic improvement.</li> <li>• Data analysis &amp; interpretation</li> </ul> <p><b>GMIS Data upload</b></p> <p><b>Technology developed</b></p> <ul style="list-style-type: none"> <li>• Demonstration of technologies in the farmer's field</li> </ul> <p><b>Technology transfer</b></p> <ul style="list-style-type: none"> <li>• Field demonstration/ Health Camp/ Exposure Visit/ Literature Provided/Goshti/Meeting Conducted</li> </ul> <p><b>Capacity Building</b></p> <ul style="list-style-type: none"> <li>• Providing skills to farmers for scientific goat farming.</li> </ul> <p><b>Publication</b></p> <ul style="list-style-type: none"> <li>• Paper/Article/ Abstract/Book/ Leaflet pamphlet</li> </ul> <p><b>Linkage created</b></p> <p><b>Other prioritized activities</b></p>	<ul style="list-style-type: none"> <li>• Animal identification, pedigree and performance recording of 1807 goats.</li> <li>• The population growth was 104.92 % during year.</li> <li>• The kidding percentage and kidding rate was 105.22% and 1.06, respectively.</li> <li>• The overall mortality was 1.96%.</li> <li>• Health coverage was 26,955 which included both prophylactics (66.76 %) and curative (33.24%). Out of total 17,995 prophylactic measures, 7084 were for endo-parasite, 2791 for ecto-parasite, 2165 for mineral deficiencies, 1985 each for FMD, ET and PPR vaccination for this financial year.</li> <li>• 20 elite bucks were distributed to the farmers for breed improvement in the breeding tract of Marwari goat.</li> <li>• Eight training were conducted and Capacity building of 264 farmers in goat rearing has been carried out.</li> <li>• The body weight at birth (2.67 kg) was improved by 18.74 % over the baseline performance (2.257 kg).</li> </ul>	<ul style="list-style-type: none"> <li>• Package of practices for abortion management in field should be developed.</li> <li>• Base line data &amp; collection should continue.</li> <li>• Genetic parameter estimation of milk yield.</li> <li>• Genetic progress need to be analyse at 9 and 12 month of age.</li> <li>• Put the buck-wise performance at 9 month of age.</li> <li>• Check the number of breeding buck requirement. It will be around 66 or more.</li> <li>• Bucks provided for last two years are 48.</li> </ul>	<ul style="list-style-type: none"> <li>• Selection of clusters &amp; farmers and Registration of adult doe (No. of animals) = 2000 per year</li> <li>• Animal Identification, pedigree and performance recording (No. of animals) = 1000 per year</li> <li>• Selection of male kids and distribution for breeding purpose (No. of animals) = 30 per year</li> <li>• Health Coverage with vaccination and deworming etc. (No. of animals) = 2000 per year</li> <li>• Capacity building of goat keepers and stake holders (No. of trainings) = 6 per year</li> <li>• Semen doses cryo-preserved for in situ / ex situ conservation of important breeds (No.) = 1000 per year</li> <li>• Field demonstration/ Health Camp/ Exposure Visit/ Seasonal Advisory/ Literature Provided/ Goshti/Meeting Conducted/ General Awareness Created (No. of trainings/ camp to be organize) = 10 per year</li> </ul>	



# MARWARI GOAT FIELD UNIT RAJUVAS, BIKANER, RAJASTHAN



*Training organized at one of help center*



*Goshti Organized at residence of one of the registered Goat breeder*



*Blood collection*



*Body weight recording*



*Distributed leaflets*



*Farmers centric distribution*

# OSMANABADI GOAT FIELD UNIT NARI, PHALTAN, MAHARASHTRA



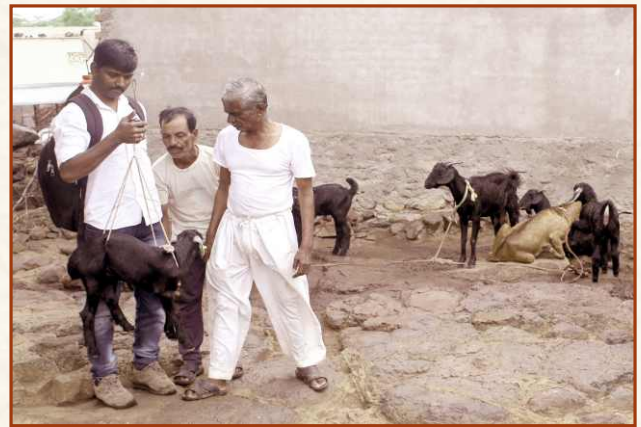
*Osmanabadi Goat rally in Morochi*



*Osmanabadi Famacha scoring*



*Osmanabadi weighing meat for  
dressing percentage*



*Osmanabadi kid weighing*



*Osmanabadi Pashu sakti training*



*Vaccination Camp*

**14. Osmanabadi Goat Field Unit, NARI, Phaltan, Maharashtra**

PI- Dr. Chanda Nimbkar, Director

**PC'S evaluation: (80-90%)**

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, timeline and targets for each of the activity	Remarks
<p><b>Performance Recording</b></p> <ul style="list-style-type: none"> <li>Performance recording of production &amp; reproduction trait in the adopted villages</li> <li>Distribution of selected buck for genetic improvement.</li> <li>Data analysis &amp; interpretation</li> </ul> <p><b>GMIS Data upload</b></p> <p><b>Technology developed</b></p> <ul style="list-style-type: none"> <li>Demonstration of technologies in the farmer's field</li> </ul> <p><b>Technology transfer</b></p> <ul style="list-style-type: none"> <li>Field demonstration/ Health Camp/ Exposure Visit/ Literature Provided/Goshti/Meeting Conducted</li> </ul> <p><b>Capacity Building</b></p> <ul style="list-style-type: none"> <li>Providing skills to farmers for scientific goat farming.</li> </ul> <p><b>Publication</b></p> <ul style="list-style-type: none"> <li>Paper/Article/ Abstract/Book/ Leaflet pamphlet</li> </ul> <p><b>Linkage created</b></p> <p><b>Other prioritized activities</b></p>	<ul style="list-style-type: none"> <li>The kidding rate was 1.62 litter size.</li> <li>The population growth over the year was 121.8 %.</li> <li>The heritability of 3,6 and 9 month age were 0.16±0.006, 0.32±0.03, and 0.27±0.01, respectively</li> <li>The heritability of 90days milk yield was 0.17±0.4.</li> <li>538 adult does are being recorded.</li> <li>Mortality during the year was 4.5%.</li> <li>32 Osmanabadi bucks were distributed.</li> <li>10 training programs for preventive health care of goats &amp; first-aid treatment in which 134 goat keepers participated.</li> <li>Exposure visit - 16, Goshti / Meetings - 25 Seasonal advisory – 6, Field demonstration- 8, and animals covered 1585 were conducted.</li> <li>2 success story, 3 abstract, 1 research paper, 14 information/booklet and 4 Marathi articles have been published.</li> </ul>	<ul style="list-style-type: none"> <li>Data on doe productivity need to be provided.</li> <li>No. of observations should be mentioned in growth and milk data and other tables.</li> <li>ADG should be carried out.</li> <li>Is kidding rate significantly different between 2016-2017 &amp; 2018-2019 as depicted in figure (Page-23).</li> </ul>	<ul style="list-style-type: none"> <li>Selection of clusters &amp; farmers and Registration of adult doe ( No. of animals) = 2000 per year</li> <li>Animal Identification, pedigree and performance recording (No. of animals) = 1000 per year</li> <li>Selection of male kids and distribution for breeding purpose (No. of animals) = 20-25 per year</li> <li>Health Coverage with vaccination and deworming etc. (No. of animals) = 2000 per year</li> <li>Capacity building of goat keepers and stake holders (No. of trainings) = 8 per year</li> <li>Semen doses cryo-preserved for in situ / ex situ conservation of important breeds (No.) = 1000 per year</li> <li>Field demonstration/ Health Camp/ Exposure Visit/ Seasonal Advisory/ Literature Provided/ Goshti/Meeting Conducted/ General Awareness Created (No. of trainings/camp to be organize) = 10 per year</li> </ul>	

**15. Sangamneri Goat Field Unit, MPKV, Rahuri , Maharashtra**

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

**PC'S evaluation: (80-90%)**

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, timeline and targets for each of the activity	Remarks
<p><b>Performance Recording</b></p> <ul style="list-style-type: none"> <li>• Performance recording of production &amp; reproduction trait in the adopted villages</li> <li>• Distribution of selected buck for genetic improvement.</li> <li>• Data analysis &amp; interpretation</li> </ul> <p><b>GMIS Data upload</b></p> <p><b>Technology developed</b></p> <ul style="list-style-type: none"> <li>• Demonstration of technologies in the farmer's field</li> </ul> <p><b>Technology transfer</b></p> <ul style="list-style-type: none"> <li>• Field demonstration/ Health Camp/ Exposure Visit/ Literature Provided/Goshti/Meeting Conducted</li> </ul> <p><b>Capacity Building</b></p> <ul style="list-style-type: none"> <li>• Providing skills to farmers for scientific goat farming.</li> </ul> <p><b>Publication</b></p> <ul style="list-style-type: none"> <li>• Paper/Article/ Abstract/Book/Leaflet pamphlet</li> </ul> <p><b>Linkage created</b></p> <p><b>Other prioritized activities</b></p>	<ul style="list-style-type: none"> <li>• Registered 2310 breedable does in four clusters.</li> <li>• Rotated 43 elite bucks in the selected clusters.</li> <li>• Population growth over the year was 39.80%.</li> <li>• Kidding rate during the year was 1.67.</li> <li>• Two national/international papers, 1 lead articles, 3 abstract, one leaflet/pamphlet, 1 book/chapter and two success story has been published.</li> <li>• Organised 4 exposure visit, 8 training programme and 17 Goshti meetings conducted.</li> <li>• One training programme is specially organized for prisoners in Central Jail Yerwada, Pune.</li> <li>• Produced and stored 5550 frozen semen doses of 12 elite bucks at FS Lab, MPKV, Rahuri.</li> </ul>	<ul style="list-style-type: none"> <li>• Base line data from each new cluster and farmers should continue.</li> <li>• Less no. of germplasm supplied.</li> <li>• Check the number of kids during birth, 3 month and 12 month of age.</li> <li>• Mortality rate and no. of animals sold need to be provided.</li> <li>• All the tables should have number of observations.</li> </ul>	<ul style="list-style-type: none"> <li>• Selection of clusters &amp; farmers and Registration of adult doe (No. of animals) = 2000 per year</li> <li>• Animal Identification, pedigree and performance recording (No. of animals) = 1000 per year</li> <li>• Selection of male kids and distribution for breeding purpose (No. of animals) = 20-25 per year</li> <li>• Health Coverage with vaccination and deworming etc. (No. of animals) = 2000 per year</li> <li>• Capacity building of goat keepers and stake holders (No. of trainings) = 6 per year</li> <li>• Semen doses cryo-preserved for in situ / ex situ conservation of important breeds (No.) = 1000 per year</li> <li>• Field demonstration/ Health Camp/ Exposure Visit/ Seasonal Advisory/ Literature Provided/ Goshti/Meeting Conducted/ General Awareness Created</li> </ul>	

# SANGAMNERI GOAT FIELD UNIT MVKV,, RAHURI, MAHARASHTRA



*Capacity building of prisoners in  
Central Jail Yerwada, Pune*



*Visit of, Scientist, PC  
Unit, AICRP on Goat Improvement*



*Training to women goat farmers*



*Inauguration of Goat milk processing unit*



*Visit of Hon. Dr. Joykrushna Jena,*



*AI Training (Capacity building)*

# SIROHI GOAT FARM UNIT ICAR-CSWRI, AVIKANAGAR, RAJASTHAN



*Tagging with laser printed tags*



*Asian regional conference on goats*



*Feeding resources of Goat*



*PI giving information about Sirohi buck*



*Moringa plantation drive*



*Visit of OIE team*

**16. Sirohi Goat Farm Unit , ICAR-CSWRI, Avikanagar, Rajasthan**

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

PC'S evaluation: (80-90%)

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, timeline and targets for each of the activity	Remarks
<p><b>Performance Recording</b></p> <ul style="list-style-type: none"> <li>• Performance recording of production &amp; reproduction trait in the adopted villages.</li> <li>• Distribution of selected buck for genetic improvement.</li> <li>• Data analysis &amp; interpretation.</li> </ul> <p><b>GMIS Data upload</b></p> <p><b>Technology developed</b></p> <ul style="list-style-type: none"> <li>• Demonstration of technologies in the farmer's field.</li> </ul> <p><b>Technology transfer</b></p> <ul style="list-style-type: none"> <li>• Field demonstration/ Health Camp/ Exposure Visit/ Literature Provided/Goshti/Meeting Conducted.</li> </ul> <p><b>Capacity Building</b></p> <ul style="list-style-type: none"> <li>• Providing skills to farmers for scientific goat farming.</li> </ul> <p><b>Publication</b></p> <ul style="list-style-type: none"> <li>• Paper/Article/ Abstract/Book/Leaflet pamphlet</li> </ul> <p><b>Linkage created</b></p> <p><b>Other prioritized activities</b></p>	<ul style="list-style-type: none"> <li>• The Overall mortality rate was 1.96%.</li> <li>• The population growth over the year was 109.85%.</li> <li>• The kidding rate was 1.16.</li> <li>• The breeding efficiency was 92.53% and 94.09%, on the basis does topped.</li> <li>• The kidding percentage was 103.73 and 105.49% on the basis does topped.</li> <li>• A total of 138 animals comprising of 121 males and 17 females were sold to the progressive farmers, Government and non-government agencies.</li> <li>• Total 4435 animals covered with ET, FMD and PPR vaccinations and deworming, dipping were given during the year.</li> </ul>	<ul style="list-style-type: none"> <li>• Performance goat in the registered farmer's flock.</li> <li>• Less no. of buck distributed.</li> <li>• Multiplier flock number should be increased.</li> </ul>	<ul style="list-style-type: none"> <li>• Selection of clusters &amp; farmers and Registration of adult doe (No. of animals) = 2000 per year</li> <li>• Animal Identification, pedigree and performance recording (No. of animals) = 1000 per year</li> <li>• Selection of male kids and distribution for breeding purpose (No. of animals) = 20-25 per year</li> <li>• Health Coverage with vaccination and deworming etc. (No. of animals) = 2000 per year</li> <li>• Capacity building of goat keepers and stakeholders (No. of trainings) = 4-8 per year</li> <li>• Semen doses cryo-preserved for in situ / ex situ conservation of important breeds (No.) = 1000 per year</li> <li>• Field demonstration/ Health Camp/ Exposure Visit/ Seasonal Advisory/ Literature Provided/ Goshti/Meeting Conducted/ General Awareness Created (No. of trainings/camp to be organize) = 5 per year</li> </ul>	

17. Sirohi Field Unit, Veterinary Collage, Vallabhnagar PI - Dr. R. K. Nagda, Dean and Professor (LPM) 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, timeline and targets for each of the activity	Remarks
<p><b>Performance Recording</b></p> <ul style="list-style-type: none"> <li>• Performance recording of production &amp; reproduction trait in the adopted villages</li> <li>• Distribution of selected buck for genetic improvement.</li> <li>• Data analysis &amp; interpretation</li> </ul> <p><b>GMIS Data upload Technology developed</b></p> <ul style="list-style-type: none"> <li>• Demonstration of technologies in the farmer's field</li> </ul> <p><b>Technology transfer</b></p> <ul style="list-style-type: none"> <li>• Field demonstration/ Health Camp/ Exposure Visit/ Literature Provided/Goshti/Meeting Conducted</li> </ul> <p><b>Capacity Building</b></p> <ul style="list-style-type: none"> <li>• Providing skills to farmers for scientific goat farming.</li> </ul> <p><b>Publication</b></p> <ul style="list-style-type: none"> <li>• Paper/Article/ Abstract/Book/Leaflet pamphlet</li> </ul> <p><b>Linkage created</b></p> <p><b>Other prioritized activities</b></p>	<ul style="list-style-type: none"> <li>• The population growth was 91.28%.</li> <li>• Total 45 breeding bucks were distributed to registered farmers for genetic improvement in the field.</li> <li>• 85.01% breeding efficiency were observed on basis of does available.</li> <li>• Kidding rate was 1.14%.</li> <li>• The overall mortality was 4.30%.</li> <li>• Preventative health care was carried out by deworming of 4701 animals, ecto- parasiticide Dipping 4096, ET vaccination 1555 &amp; 600 PPR vaccination was done.</li> <li>• 575 animals were sold during report period. Out of which 575 (85.91%) animals were sold for breeding purpose.</li> <li>• 9 trainings have been organized.</li> </ul>	<ul style="list-style-type: none"> <li>• Success story.</li> <li>• Doe productivity data should be provided.</li> <li>• Check the flock statistics table and growth performance table, total number of birth-970, mortality and sale of animal – 41 but 3M body weight recording is on 752 animals.</li> <li>• Check body measurement table and number of observation.</li> <li>• Mortality rate increased during the last two years.</li> </ul>	<ul style="list-style-type: none"> <li>• Selection of clusters &amp; farmers and Registration of adult doe (No. of animals) = 2000 per year.</li> <li>• Animal Identification, pedigree and performance recording (No. of animals) = 1000 per year.</li> <li>• Selection of male kids and distribution for breeding purpose (No. of animals) = 20-25per year.</li> <li>• Health Coverage with vaccination and deworming etc. (No. of animals) = 2000 per year.</li> <li>• Capacity building of goat keepers and stake holders (No. of trainings) = 4-8 per year.</li> <li>• Semen doses cryo-preserved for in situ /ex situ conservation of important breeds (No.) = 1000 per year.</li> <li>• Field demonstration/ Health Camp/ Exposure Visit/ Seasonal Advisory/ Literature provided/ Goshti/Meeting Conducted/ General Awareness Created (No. of trainings/camp to be organize) = 5 per year.</li> </ul>	



# SIROHI GOAT FIELD UNIT VETERINARY COLLEGE, VALLABHNAGAR



*AI in goats*



*Tirpal distribution*



*Lucerne Seed Distribution*



*Evaluation of Semen*



*Recording of milk yield*



*Exposure visit at CIRG*

# SURTI GOAT FIELD UNIT NAU, NAVSARI, GUJRAT



*Vaccination*



*Buck Supplied in the field*



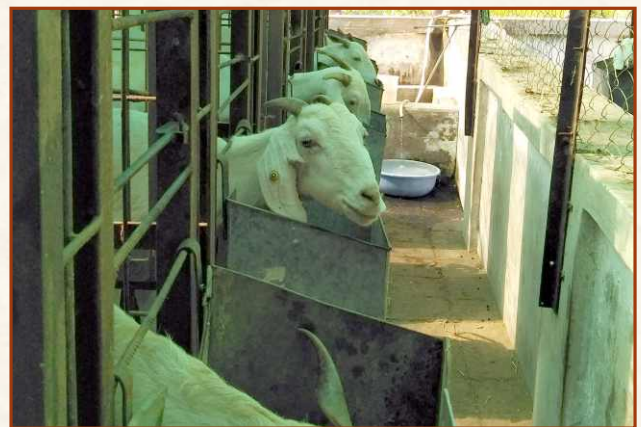
*Extension activity*



*Rumen liquor collection at farm*



*Training of Tribal women farmers at farm*



*Metabolism trial of research work*

**18. Surti Field Unit, N.A.U., Navsari, Gujarat**  
 PI - Dr. Navin B. Patel, Research Scientist (Animal Nutrition) (AG&B)  
**PC'S Evaluation: (50-60%)**

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, timeline and targets for each of the activity	Remarks
<p><b>Performance Recording</b></p> <ul style="list-style-type: none"> <li>• Performance recording of production &amp; reproduction trait in the adopted villages.</li> <li>• Distribution of selected buck for genetic improvement.</li> <li>• Data analysis &amp; interpretation.</li> </ul> <p><b>GMIS Data upload</b></p> <p><b>Technology developed</b></p> <ul style="list-style-type: none"> <li>• Demonstration of technologies in the farmer's field.</li> </ul> <p><b>Technology transfer</b></p> <ul style="list-style-type: none"> <li>• Field demonstration/ Health Camp/ Exposure Visit/ Literature Provided/Goshti/Meeting Conducted.</li> </ul> <p><b>Capacity Building</b></p> <ul style="list-style-type: none"> <li>• Providing skills to farmers for scientific goat farming.</li> </ul> <p><b>Publication</b></p> <ul style="list-style-type: none"> <li>• Paper/Article/ Abstract/Book/ Leaflet pamphlet</li> </ul> <p><b>Linkage created</b></p> <p><b>Other prioritized activities</b></p>	<ul style="list-style-type: none"> <li>• Total 40 breeding bucks along with 45 breedable females were provided to goat farmers of adopted villages</li> <li>• Overall mortality was 6.64%.</li> <li>• The kidding rate (litter size) was 1.15.</li> <li>• One (1) day training was organised with 48 tribal women goat farmers. 229 farmers were trained.</li> <li>• Significant increase in 90 and 150 day milk yield had been observed.</li> <li>• 3 research papers published.</li> </ul>	<ul style="list-style-type: none"> <li>• Success story.</li> <li>• Training to farmers was less.</li> <li>• Production performance table should indicate number of observation.</li> <li>• No field work carried out during the year.</li> <li>• No work was carried out based on technical programme.</li> <li>• Check the flock statistics table (table 1).</li> <li>• Check the body weight data of 2017-18 and 2018-19.</li> <li>• During the period field observation is less.</li> <li>• Check the milk yield table and reproductive performance also.</li> </ul>	<ul style="list-style-type: none"> <li>• Selection of clusters &amp; farmers and Registration of adult doe (No. of animals) = 2000 per year.</li> <li>• Animal Identification, pedigree and performance recording (No. of animals) = 1000 per year.</li> <li>• Selection of male kids and distribution for breeding purpose (No. of animals) = 20-25 per year.</li> <li>• Health Coverage with vaccination and deworming etc. (No. of animals) = 2000 per year.</li> <li>• Capacity building of goat keepers and stake holders (No. of trainings) = 4-8 per year.</li> <li>• Semen doses cryo-preserved for in situ / ex situ conservation of important breeds (No.) = 1000 per year.</li> <li>• Field demonstration/ Health Camp/ Exposure Visit/ Seasonal Advisory/ Literature provided/ Goshti/Meeting Conducted/ General Awareness Created (No. of trainings/camp to be organize) = 5 per year.</li> </ul>	

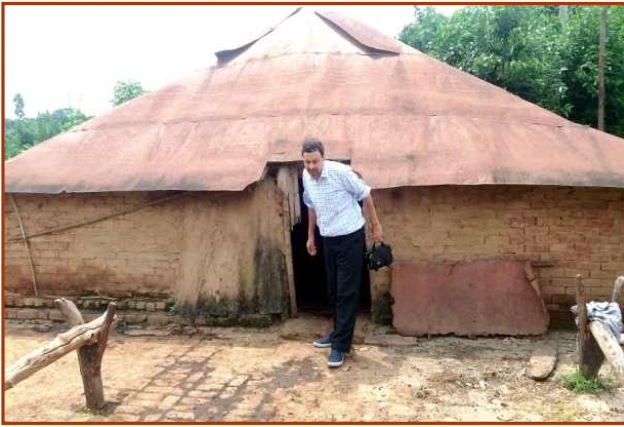
**19. Uttarakhand Goat Field Unit, GBPUA&T, Pantnagar**

PI - Dr. R.K. Sharma, Professor (AB&B)

PC'S Evaluation: (70-80%)

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, timeline and targets for each of the activity	Remarks
<p><b>Performance Recording</b></p> <ul style="list-style-type: none"> <li>• Performance recording of production &amp; reproduction trait in the adopted villages</li> <li>• Distribution of selected buck for genetic improvement.</li> <li>• Data analysis &amp; interpretation</li> </ul> <p><b>GMIS Data upload</b></p> <p><b>Technology developed</b></p> <ul style="list-style-type: none"> <li>• Demonstration of technologies in the farmer's field</li> </ul> <p><b>Technology transfer</b></p> <ul style="list-style-type: none"> <li>• Field demonstration/ Health Camp/ Exposure Visit/ Literature Provided/ Goshti/ Meeting Conducted</li> </ul> <p><b>Capacity Building</b></p> <ul style="list-style-type: none"> <li>• Providing skills to farmers for scientific goat farming.</li> </ul> <p><b>Publication</b></p> <p>Paper/Article/Abstract/ Book/Leaflet pamphlet</p> <p><b>Linkage created</b></p> <p><b>Other prioritized activities</b></p>	<ul style="list-style-type: none"> <li>• A new cluster in hilly area namely "Majhera" in Nainital district has been added</li> <li>• The population growth over the year was 49.19%.</li> <li>• 50 'Pantja' bucks were distributed.</li> <li>• The mortality in the total flock was 6.88%.</li> <li>• The kidding rate was 1.57.</li> <li>• 03 Goat Awareness training programs were organized wherein 488 farmers were trained.</li> <li>• The vaccinated animal was 1625 PPR, 1402 ET, 1603 (FMD, HS&amp; BQ) and 2028 deworming.</li> <li>• One success story, 1 booklet and 1 leaflet were published.</li> <li>• Base line survey was carried out in 36 villages, covering 123 households, who maintained 2,136 goats (31.46% Pantja)</li> </ul>	<ul style="list-style-type: none"> <li>• Genetic parameter estimation.</li> <li>• No. of farmer should be more.</li> <li>• ADG need to be analysed.</li> <li>• Less no. of training organized.</li> <li>• Research publication.</li> </ul>	<ul style="list-style-type: none"> <li>• Selection of clusters &amp; farmers and Registration of adult doe (No. of animals) = 2000 per year.</li> <li>• Animal Identification, pedigree and performance recording (No. of animals) = 1000 per year.</li> <li>• Selection of male kids and distribution for breeding purpose (No. of animals) = 20-25 per year</li> <li>• Health Coverage with vaccination and deworming etc. (No. of animals) = 2000 per year</li> <li>• Capacity building of goat keepers and stake holders (No. of trainings) = 4-8 per year.</li> <li>• Semen doses cryo-preserved for in situ / ex situ conservation of important breeds (No.) = 1000 per year.</li> <li>• Field demonstration/ Health Camp/ Exposure Visit/ Seasonal Advisory/ Literature provided/ Goshti/Meeting Conducted/ General Awareness Created (No. of trainings/camp to be organize) = 5 per year.</li> </ul>	

# UTTRAKHAND LOCAL GOAT FIELD UNIT GBUPA&T, PANTNAGAR, UTTARAKHAND



*Housing system in field*



*Concentrate feeding*



*Item distribution*



*Goat awareness and training programme  
for goat farmers at Kaladungi*



*Buck Distribution*



*Treatment under field conditions*

# BLACK BENGAL FIELD UNIT ICAR-RCER, PATNA



*Hybrid Napier distribution in Samstipur*



*Awareness programme in Araria*



*PPR vaccination in East Champaran*



*Interaction with selected farmers  
in Jamui*



*Medicine distribution*



*Health Camp in Samastipur*

**20. Black Bengal Field Unit, ICAR-RCER, Patna**

PI - Dr. Reena Kumari Kamal, Scientist (Division of livestock & Fisheries Management)

**PC'S Evaluation: (60-70%)**

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, timeline and targets for each of the activity	Remarks
<p><b>Performance Recording</b></p> <ul style="list-style-type: none"> <li>• Performance recording of production &amp; reproduction trait in the adopted villages</li> <li>• Distribution of selected buck for genetic improvement.</li> <li>• Data analysis &amp; interpretation</li> </ul> <p><b>GMIS Data upload</b></p> <p><b>Technology developed</b></p> <ul style="list-style-type: none"> <li>• Demonstration of technologies in the farmer's field</li> </ul> <p><b>Technology transfer</b></p> <ul style="list-style-type: none"> <li>• Field demonstration/ Health Camp/ Exposure Visit/ Literature Provided/Goshti/Meeting Conducted</li> </ul> <p><b>Capacity Building</b></p> <ul style="list-style-type: none"> <li>• Providing skills to farmers for scientific goat farming.</li> </ul> <p><b>Publication</b></p> <p>Paper/Article/Abstract/ Book/Leaflet pamphlet</p> <p><b>Linkage created</b></p> <p><b>Other prioritized activities</b></p>	<ul style="list-style-type: none"> <li>• Five clusters have been established in different districts situated in different zones of Bihar.</li> <li>• 15 bucks were distributed.</li> <li>• The mortality in the total flock was 2.89%.</li> <li>• The kidding percentage was recorded at 1.56±0.36.</li> <li>• 183 farmers at different centers have been adopted having 508 adult does.</li> <li>• All the goats in coverage areas were vaccinated with PPR (1056 goats), therapeutic interventions (556 goats) and deworming of 1521 goats have been done.</li> <li>• Three days training programme on “Modern Techniques in Goat Farming” was organized in which 28 farmers from East Champaran participated.</li> <li>• Ten animal health camps were organized in field level.</li> <li>• Training was organized for capacity building in which 220 farmers were benefitted.</li> </ul>	<ul style="list-style-type: none"> <li>• Recording &amp; performance data details need to be provided</li> <li>• Cluster distribution not provided.</li> <li>• Population growth should be given</li> <li>• Package and practices need to be finalized.</li> </ul>	<ul style="list-style-type: none"> <li>• Selection of clusters &amp; farmers and Registration of adult doe (No. of animals) = 2000 per year.</li> <li>• Animal Identification, pedigree and performance recording (No. of animals) = 1000 per year.</li> <li>• Selection of male kids and distribution for breeding purpose ( No. of animals) = 20-25 per year</li> <li>• Health Coverage with vaccination and deworming etc. ( No. of animals) = 2000 per year</li> <li>• Capacity building of goat keepers and stake holders (No. of trainings) = 4-8 per year.</li> <li>• Semen doses cryo-preserved for in situ / ex situ conservation of important breeds (No.) = 1000 per year.</li> <li>• Field demonstration/ Health Camp/ Exposure Visit/ Seasonal Advisory/ Literature provided/ Goshti/Meeting Conducted/ General Awareness Created (No. of trainings/camp to be organize) =5 per year.</li> </ul>	

**21. Bundelkhandi Goat Field Unit, IGFRI, Jhansi**

PI - Dr. Sanat Kumar Mahanta, Principal Scientist (Livestock Production Management)

**PC'S Evaluation: (60-70%)**

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, timeline and targets for each of the activity	Remarks
<p><b>Performance Recording</b></p> <ul style="list-style-type: none"> <li>• Performance recording of production &amp; reproduction trait in the adopted villages</li> <li>• Distribution of selected buck for genetic improvement.</li> <li>• Data analysis &amp; interpretation</li> </ul> <p><b>GMIS Data upload</b></p> <p><b>Technology developed</b></p> <ul style="list-style-type: none"> <li>• Demonstration of technologies in the farmer's field</li> </ul> <p><b>Technology transfer</b></p> <ul style="list-style-type: none"> <li>• Field demonstration/ Health Camp/ Exposure Visit/ Literature Provided/Goshti/Meeting Conducted</li> </ul> <p><b>Capacity Building</b></p> <ul style="list-style-type: none"> <li>• Providing skills to farmers for scientific goat farming.</li> </ul> <p><b>Publication</b></p> <p>Paper/Article/Abstract/ Book/Leaflet pamphlet</p> <p><b>Linkage created</b></p> <p><b>Other prioritized activities</b></p>	<ul style="list-style-type: none"> <li>• Registration of 58 households/farmers with 978 goats under the project was done.</li> <li>• 10 bucks were distributed.</li> <li>• The mortality in the total flock was 17.01%.</li> <li>• The kidding rate was 1.20.</li> <li>• Biometric measurement of 241 Bundelkhandi goats was performed.</li> <li>• Average body weight at 12 months of age and milk yield were 19.75 ± 0.62 and 0.628 ± 0.04 kg, respectively</li> <li>• Vaccination against PPR (606 animals), ET (500 animals), FMD (250 animals) and deworming against endo-parasites (770 animals) was given.</li> <li>• Three capacity building/training programmes involving 112 farmers were organized.</li> <li>• One folder was published.</li> </ul>	<ul style="list-style-type: none"> <li>• Recording &amp; performance data details need to be provided</li> <li>• Cluster distribution not provided.</li> <li>• Tagging should be completed in adopted village.</li> <li>• Research publication and success story.</li> <li>• Buck distribution should be done in adopted village.</li> <li>• Package of practices for the region should be published.</li> </ul>	<ul style="list-style-type: none"> <li>• Selection of clusters &amp; farmers and Registration of adult doe (No. of animals) = 2000 per year.</li> <li>• Animal Identification, pedigree and performance recording (No. of animals) = 1000 per year.</li> <li>• Selection of male kids and distribution for breeding purpose (No. of animals) = 20-25 per year</li> <li>• Health Coverage with vaccination and deworming etc. ( No. of animals) = 2000 per year</li> <li>• Capacity building of goat keepers and stake holders (No. of trainings) = 4-8 per year.</li> <li>• Semen doses cryo-preserved for in situ / ex situ conservation of important breeds (No.) = 1000 per year.</li> <li>• Field demonstration/ Health Camp/ Exposure Visit/ Seasonal Advisory/ Literature provided/ Goshti/Meeting Conducted/ General Awareness Created (No. of trainings/camp to be organize) =5 per year.</li> </ul>	



# BUNDELKHANDI GOAT FIELD UNIT IGFRI, JHANSI



*PPR Vaccination*



*Deworming*



*Feeding groundnut haulms*



*Capacity building*



*Morphological measurements*



*A Doe with kid*

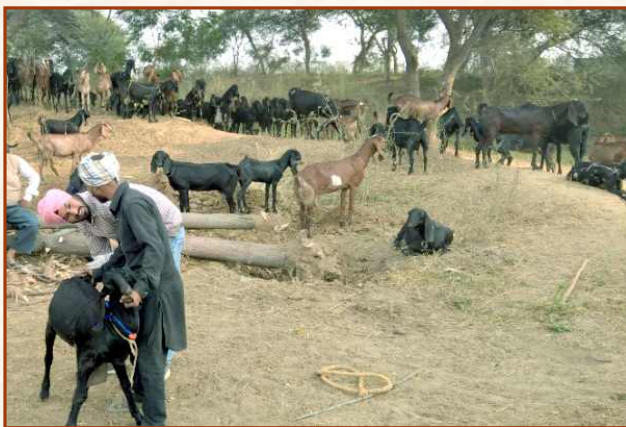
# BEETAL GOAT FIELD UNIT GADVASU, LUDHIANA



*Demonstration of phenotypic traits of Beetal lactating doe*



*Training programme on scientific goat farming*



*Recording of body measurements of Beetal does in the selected village*



*Beetal goats selected under the programme for monitoring of performance*



*Beetal flock consuming pruned tree leaves in selected area*



*Eucalyptus leaves feeding in hanging position on ropes*

**22. Beetal Goat Field Unit, GADVASU, Ludhiana**  
 PI - Dr. Sandeep Kaswan, Assistant Professor (LPM)  
**PC'S Evaluation: (60-70%)**

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, timeline and targets for each of the activity	Remarks
<p><b>Performance Recording</b></p> <ul style="list-style-type: none"> <li>• Performance recording of production &amp; reproduction trait in the adopted villages</li> <li>• Distribution of selected buck for genetic improvement.</li> <li>• Data analysis &amp; interpretation</li> </ul> <p><b>GMIS Data upload</b></p> <p><b>Technology developed</b></p> <ul style="list-style-type: none"> <li>• Demonstration of technologies in the farmer's field</li> </ul> <p><b>Technology transfer</b></p> <ul style="list-style-type: none"> <li>• Field demonstration/ Health Camp/ Exposure Visit/ Literature Provided/Goshti/Meeting Conducted</li> </ul> <p><b>Capacity Building</b></p> <ul style="list-style-type: none"> <li>• Providing skills to farmers for scientific goat farming.</li> </ul> <p><b>Publication</b></p> <p>Paper/Article/Abstract/ Book/Leaflet pamphlet</p> <p><b>Linkage created</b></p> <p><b>Other prioritized activities</b></p>	<ul style="list-style-type: none"> <li>• Adopted one village i.e. Bhundri in Ludhiana district for implementation of technical programme of AICRP-GI on Beetal goats.</li> <li>• Eleven households were identified with total goat population of 465 heads.</li> <li>• Average body condition score (BCS) of Beetal bucks and does was <math>2.5 \pm 0.2</math> and <math>2.3 \pm 0.1</math> in the selected area.</li> <li>• Two trainings were conducted on goat farming practices with 51 participants.</li> <li>• One folder developed.</li> </ul>	<ul style="list-style-type: none"> <li>•Recording &amp; performance data details need to be provided</li> <li>•Tagging should be completed in adopted village.</li> <li>•Buck distribution should be done in adopted village.</li> <li>•Work should be carried out as per technical program of AICRP.</li> </ul>	<ul style="list-style-type: none"> <li>• Selection of clusters &amp; farmers and Registration of adult doe (No. of animals) = 2000 per year.</li> <li>• Animal Identification, pedigree and performance recording (No. of animals) = 1000 per year.</li> <li>• Selection of male kids and distribution for breeding purpose (No. of animals) = 20-25 per year</li> <li>• Health Coverage with vaccination and deworming etc. (No. of animals) = 2000 per year</li> <li>• Capacity building of goat keepers and stake holders (No. of trainings) = 4-8 per year.</li> <li>• Semen doses cryo-preserved for in situ / ex situ conservation of important breeds (No.) = 1000 per year.</li> <li>• Field demonstration/ Health Camp/ Exposure Visit/ Seasonal Advisory/ Literature provided/ Goshti/Meeting Conducted/ General Awareness Created (No. of trainings/camp to be organize) =5 per year.</li> </ul>	

### 3. Financial/Administrative performance of AICRP on Goat Improvement 2018-19

#### BUDGET ALLOCATION AND FUND PROVISIONS

For the financial year 2018-19, a total of 542.19 lakhs was allocated as RE by ICAR New Delhi.

**Table 6: Comprehensive Head wise RE for the financial year 2018-19**

S. No.	Head	Other than NEH & TSP	NEH	TSP	Total
<b>A</b>	<b>Grants for creation of Capital Assets (CAPITAL)</b>				
<b>1</b>	Works	00	00	00	00
	<i>a) Land</i>	00	00	00	00
	<i>b) Building</i>	00	00	00	00
	<i>(i) Office building</i>	00	00	00	00
	<i>(ii) Residential building</i>	00	00	00	00
	<i>(iii) Minor works</i>	35.30	00	00	35.30
<b>2</b>	Equipment	42.32	00	00	42.32
<b>3</b>	Information Technology	11.00	00	00	11.00
<b>4</b>	Library books & Journals	00	00	00	00
<b>5</b>	Vehicle & Vessels	00	00	00	00
<b>6</b>	Livestock	24.50	00	00	24.50
<b>7</b>	Furniture & Fixtures	00	00	00	00
<b>8</b>	Others	13.38	00	00	13.38
<b>9</b>	SCSP	13.18	00	00	13.18
	<b>Total Capital (Grants for creation of Capital Assets)</b>	<b>00</b>	<b>00</b>	<b>00</b>	<b>139.68</b>
<b>B</b>	<b>Grant-in-aid: General (REVENUE)</b>	00	00	00	00
	<b>Traveling allowances</b>	00	00	00	00
	<i>a) Domestic TA/Transfer TA</i>	31.15	00	00	31.15
	<i>b) Foreign TA</i>	00	00	00	00
	<b>Total Traveling Allowances</b>	00	00	00	00
	<b>Research &amp; Operational Expenses</b>	00	00	00	00
	<i>a) Research Expenses</i>	102.00	00	00	102.00
	<i>b) Operational Expenses</i>	159.35	22.00	60.00	241.35
	<i>c) SCSP</i>	28.01	00	00	28.01
	<b>Total Research &amp; Operational Expenses</b>	<b>289.36</b>	<b>22.00</b>	<b>60.00</b>	<b>402.51</b>
	<b>Administrative Expenses</b>	00	00	00	00
	<i>a) Infrastructure</i>	00	00	00	00
	<i>b) Communication</i>	00	00	00	00
	<i>c) Repairs &amp; Maintenance</i>	00	00	00	00
	<i>i) Equipment's, Vehicles &amp;</i>	00	00	00	00

	other				
	ii) Office building	00	00	00	00
	iii) Residential building	00	00	00	00
	iv) Minor Works	00	00	00	00
	d) Others (excluding TA)	00	00	00	00
	<b>Total - Administrative Expenses</b>	00	00	00	00
	<b>Miscellaneous Expenses</b>	00	00	00	00
	a) HRD	00	00	00	00
	b) Other Items (Fellowships, Scholarships etc.)	00	00	00	00
	c) Publicity & Exhibitions	00	00	00	00
	d) Guest House –Maintenance	00	00	00	00
	e) Other Miscellaneous	00	00	00	00
	<b>Total - Miscellaneous Expenses</b>	00	00	00	00
	<b>Total Grants in Aid – General</b>				<b>402.51</b>
	<i>Grand Total (Capital +Revenue )</i>				<b>542.19</b>

**Table 7: Head-wise Progressive Budget allocation Actual and Expenditure from 2013-19**

Head	2013-14 (Actual)	2014-15 (Actual)	2015-16 (Actual)	2016-17 (R.E)	2017-18 (R.E)	2018-19 (R.E.)
<b>A. CAPITAL</b>						
1. Works	5.00	5.00	35.00	0.00	0.00	0.00
A. Land	0.00	0.00	0.00	0.00	0.00	0.00
B. Building	0.00	0.00	0.00	0.00	0.00	0.00
(i) Office Building	0.00	0.00	0.00	0.00	0.00	0.00
(ii) Residential building	0.00	0.00	0.00	0.00	0.00	0.00
(iii) Minor works	5.00	0.00	0.00	12.00	35.00	35.30
2. Equipment	3.00	17.00	15.00	6.00	33.00	42.32
3. Information Technology	0.00	0.00	12.50	0.00	5.80	11.00
4. Library Books & Journals	0.00	0.00	0.00	0.00	0.00	0.00
1. Vehicles	0.00	0.00	0.00	0.00	0.00	0.00
6. Livestock	0.00	0.00	0.00	0.00	40.00	24.50
7. Furniture & fixtures	2.00	4.00	1.00	0.00	8.00	0.00
8. Others (specify)	0.00	0.00	0.00	14.00	0.00	17.30
9 SCSP	0.00	0.00	0.00	0.00	0.00	13.18
<b>Total Capital (A)</b>	<b>10.00</b>	<b>26.00</b>	<b>63.50</b>	<b>32.00</b>	<b>121.80</b>	<b>143.60</b>
<b>B. REVENUE</b>						
<b>1. Establish. expenses Salaries</b>	<b>155.00</b>	<b>103.00</b>	<b>84.00</b>	<b>59.00</b>	<b>0.00</b>	<b>0.00</b>
i. Establish. Charges-Regular	155.00	0.00	0.00	59.00	0.00	0.00
ii. Establish. Charges-Arrears	0.00	0.00	0.00	0.00	0.00	0.00
<b>2. Traveling Allowances</b>	<b>21.00</b>	<b>16.00</b>	<b>20.75</b>	<b>15.00</b>	<b>0.00</b>	<b>0.00</b>

a) Domestic T.A.	21.00	16.00	20.75	15.00	25.00	32.15
b) Foreign T.A.	0.00	0.00	0.00	0.00	0.00	0.00
3 SCSP	0.00	0.00	0.00	0.00	0.00	28.01
<b>4. Research &amp; Operational Expenses</b>	<b>160.00</b>	<b>186.00</b>	<b>275.65</b>	<b>258.00</b>	<b>0.00</b>	<b>0.00</b>
a) Research	90.00	0.00	95.65	100.00	200.00	200.00
b) Operational	70.00	0.00	180.00	158.00	136.20	138.43
<b>5. Administrative Expenses</b>	<b>0.00</b>	<b>0.00</b>	<b>4.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
a) Infrastructure	0.00	0.00	4.00	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
b) Communication	0.00	0.00	0.00	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
c) Repairs & Maintenance	0.00	0.00	0.00	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>6. HRD</b>	<b>7.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
a) Within India	7.00	0.00	0.00	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
b) Abroad	0.00	0.00	0.00	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>7. Other items, if any, (specify)</b>	<b>7.00</b>	<b>2.00</b>	<b>2.10</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Total Revenue (B)</b>	<b>350.00</b>	<b>307.00</b>	<b>386.50</b>	<b>273.00</b>	<b>0.00</b>	<b>398.59</b>
<b>Grand Total (A+B)</b>	<b>360.00</b>	<b>333.00</b>	<b>450.00</b>	<b>364.00</b>	<b>483.00</b>	<b>542.19</b>

**Table 8: Head Wise Unit Wise Revised Estimate for the Financial Year 2018-19**

(₹. In Lakhs)

S. N O	AICRP on Goat Improvement	Capital						General					RE
		Work	SCSP	Equip-ment	Information Tech.	Live-stock	Other s	TA	Contingency				
									Genera l	SCSP	NEH	TSP	
1	P.C. Unit, CIRG, Makhdoom, Farah	0.00	0.00	0.00	4.00	0.00	0.00	6.50	28.16	0.00	0.00	25.00	63.66
2	Andaman Goat Unit, CIARI, Port Blair	2.25	0.93	2.27	0.00	1.20	0.50	2.00	15.72	1.75	0.00	0.00	26.62
3	Assam Hill Goat Unit, AAU Khanpara, Guwahati (NEH)	1.50	0.93	2.27	0.00	1.40	0.80	1.60	3.17	1.75	22.00	0.00	35.42
4	Barbari Farm Unit, CIRG, Makhdoom, Farah	5.00	0.93	3.52	0.50	2.00	5.00	2.00	22.92	0.00	0.00	0.00	41.87
5	Bengal Goat Unit, BAU, Ranchi (TSP)	1.50	0.53	1.77	0.50	1.40	0.50	1.25	1.16	1.75	0.00	4.84	15.20
6	Black Bengal Goat Unit, WBUV&FS, Kolkata (TSP)	1.50	0.93	2.27	0.50	1.40	0.50	1.25	9.75	1.75	0.00	5.67	25.52
7	Changthangi Goat Unit, SKUAST-K, Leh (TSP)	1.65	0.73	2.27	0.50	1.40	0.50	2.00	10.48	1.75	0.00	6.64	27.92
8	Gaddi Field Unit, HPKV, Palampur (HP) (TSP)	1.50	0.73	2.27	0.50	1.40	0.50	1.50	11.03	1.75	0.00	6.84	28.02
9	Ganjam Field Unit, OUAT, Bhubaneswar (TSP)	1.55	0.73	2.27	0.50	1.40	0.50	1.00	7.80	1.75	0.00	5.30	22.80
10	Himalayan Goat Unit, IVRI, Mukteswar.	1.00	0.53	1.77	0.50	0.90	0.50	1.00	5.55	1.75	0.00	0.00	13.50
11	Jamunapari Farm Unit, CIRG, Makhdoom	5.50	0.77	3.98	0.50	2.00	4.50	2.10	22.52	0.00	0.00	0.00	41.87
12	Malabari Field Unit, KVA & S, Trissur Kerala	2.50	0.73	2.77	0.50	1.40	0.50	1.70	16.77	1.75	0.00	0.00	28.62
13	Marwari Field Unit, RAJUV & AS, Bikaner	1.00	0.73	2.77	0.50	1.40	0.50	1.10	14.82	1.75	0.00	0.00	24.57
14	Osmanabadi Unit, NARI, Phaltan (MH)	1.50	0.73	2.77	0.50	1.20	0.50	1.50	17.16	1.76	0.00	0.00	27.62
15	Sangamneri Field Unit, MPKV, Rahuri	1.50	0.73	2.27	0.50	1.40	0.50	1.35	17.72	1.75	0.00	0.00	27.72
16	Sirohi Farm Unit, CSWRI, Avikanagar	3.25	0.73	3.27	0.50	1.40	0.50	1.80	13.17	1.75	0.00	0.00	26.37
17	Sirohi Field unit, RAJUV&AS, Vallabhnagar (TSP)	1.00	0.73	2.27	0.50	1.40	0.50	1.00	13.53	1.75	0.00	4.94	27.62
18	Surti Field Unit, N.A.U, Navsari (Gujarat) (TSP)	0.60	0.53	0.27	0.00	0.40	0.00	0.50	3.68	1.75	0.00	0.77	8.50
19	Uttarakhand Goat Unit, GBPUA&T, Pantnagar	1.00	0.53	1.27	0.00	1.40	0.50	1.00	11.32	1.75	0.00	0.00	18.77
20	Bundelkhandi Goat Unit, IGFR, Jhansi	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.00	0.00	0.00	0.00	5.00
21	Black Bengal Goat Unit, ICAR-RCER, Patna	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.00	0.00	0.00	0.00	5.00
		<b>35.30</b>	<b>13.18</b>	<b>42.32</b>	<b>11.00</b>	<b>24.50</b>	<b>17.30</b>	<b>32.15</b>	<b>256.43</b>	<b>28.01</b>	<b>22.00</b>	<b>60.00</b>	<b>542.19</b>

**Table 9: Unit wise Fund utilized during 2018-19**

S. NO	AICRP on Goat Improvement	Fund Release 2018-19	Fund utilized	% Fund Utilization
1	P.C. Unit, CIRG, Makhdoom, Farah	51.70	44.24	92.88
2	Andaman Goat Unit, CIARI, Port Blair	26.62	26.51	99.58
3	Assam Hill Goat Unit, AAU Khanpara, Guwahati (NEH)	35.42	35.38	99.88
4	Barbari Farm Unit, CIRG, Makhdoom	41.87	29.53	76.52
5	Bengal Goat Unit, BAU, Ranchi (TSP)	29.42	19.29	65.56
6	Black Bengal Goat Unit , WBUV&FS, Kolkata (TSP)	25.52	25.15	98.55
7	Changthangi Goat Unit, SKUAST-K, Leh (TSP)	27.92	21.89	78.40
8	Gaddi Field Unit, HPKV, Palampur (HP) (TSP)	28.02	25.92	92.50
9	Ganjam Field Unit, OUAT, Bhubaneshwar. (TSP)	22.80	15.10	66.22
10	Himalayan Goat Unit, IVRI, Mukteswar.	26.05	18.49	70.97
11	Jamunapari Farm Unit, CIRG	43.35	42.38	97.76
12	Malabari Field Unit, KVA & S, Trissur Kerala	28.62	28.10	98.18
13	Marwari Field Unit, RAJUV & AS, Bikaner	24.57	24.50	99.71
14	Osmanbadi Unit, NARI, Phaltan (MH)	27.62	27.62	100
15	Sangamneri Field Unit, MPKV, Rahuri	27.72	27.63	99.67
16	Sirohi Farm Unit , CSWRI, Avikanagar	26.37	11.64	44.14
17	Sirohi Field unit, RAJUV&AS, Vallabh Nagar (TSP)	27.62	27.60	99.92
18	Surti Field Unit, N.A.U, Navsari (Gujarat) (TSP)	27.85	19.34	69.44
19	Uttarakhand Goat Unit, GBPUA&T, Pantnagar	25.36	22.58	89.03
20	Bundelkhandi Goat Unit, IGFRI, Jhansi	5.00	4.62	92.40
21	Black Bengal Goat Unit , ICAR- RCER, Patna	5.00	4.99	99.80



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

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**Proceedings**

The 18th Annual Review Meet (ARM) of AICRP on Goat Improvement held at  
CSK-Himachal Pradesh Krishi Vishva Vidyalaya Kangra, Palampur (HP) during 20-21 June, 2018

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Annual review meet of AICRP on goat improvement was organized at College of Veterinary Science & Animal Science CSK- Himachal Pradesh Krishi Vishva Vidyalaya Kangra, Palampur during July 20-21, 2018. Dr. R.S. Jamwal, Director of Research, CSKHPKV, Palampur, extended a hearty welcome to all the delegates and highlighted research activities of university. Dr. M.S. Chauhan, Director CIRG Makhdoom, in his opening remark briefed about the importance of goat in rural economy, overview of AICRP programme, challenges in future goat production and how to double the income of goat farmers by 2022. Dr. R.S. Gandhi, ADG (AP&B), ICAR, New Delhi, in his address highlighted the genetic resources of Himachal Pradesh, increasing farmer's income by 2022 and value addition of meat and milk and involvement of corporate sector for goat improvement. Dr. J.K. Jena, DDG (AS), ICAR, New Delhi, highlighted the strategy to enhance meat & milk production, adaptation & preventive health care. He also stressed to increase the impact of programme and how to make livestock production a viable industry by 2050. Prof. A.K. Sarial, Vice chancellor, CSKHPKV, Palampur, stressed upon the effort made by the university to improve Gaddi goat in the native tract. He also emphasized on promising technologies developed by the university and stressed on the selection of better genotype and their multiplication in home tract. Two publications were released during the inaugural session. Dr. Mandeep Sharma, Dean, COVAS, CSKHPKV, Palampur, proposed vote of thanks during the inaugural session.

Dr. P.K. Rout, Principal Scientist & Incharge of AICRP on goat improvement, presented the progress report of 19 units, achievements and impact of the programme during 2017-18. In this programme, the principal investigators from 16 field units & 3 farm units presented progress report of their centres and future action plan of the centre for the next year.

The **technical session I** was chaired by Dr. J. K. Jena, DDG (AS), Co-chaired by Dr. R. S. Gandhi, ADG (AP&B), ICAR and Dr. M. S. Chauhan, Director, ICAR- CIRG, Mathura. The session started with the presentation of project coordinators report by Dr. M. S. Chauhan, Director and Dr. P. K. Rout, I/c AICRP. The presentation included brief introduction of the programme, action taken report on 17th ARM Proceedings, salient achievements, impact, monitoring, evaluation, deliverable during 2017-2018 and future action plan.

The Progress reports of all the field units were presented during the **technical session II**. The following field units presented their progress report: (i) Andaman Goat Field Unit, ICAR-CARI, Port Blair, (ii) Assam Hill Goat Field Unit, AAU, Khanapara, Guwahati, (iii) Black Bengal Field Unit, Kolkata, (iv) Black Bengal Field Unit, Ranchi, (v) Changthangi Goat Field Unit, SKUAST-K, Leh (J&K), (vi) Gaddi Field Unit Palampur, (vii) Ganjam Field Unit, Bhubaneswar, (viii) Himalayan Local Goats Field Unit,

IVRI, Mukteswar. Dr. M. K. Singh and Dr. Mahesh Dige were the rapporteurs for all the sessions.

On **July 20, 2018 technical session II** was chaired by Dr. J.K. Jena and Dr. R. S. Gandhi, ADG (AP&B), ICAR and Dr. M. S. Chauhan, Director, ICAR- CIRG. The session continued with the presentation of the remaining field units i. e (ix) Malabari Goat Field Unit, Mannuthy, (x) Marwari Goat Field Unit, Bikaner, (xi) Osmanabadi Goat Field Unit, Phaltan, (xii) Sirohi Goat Field Unit Vallabh Nagar, (xiii) Surti Goat Field Unit, Navsari and (xiv) Uttarakhand Local Goat Field Unit, GBPUA&T, Pantnagar. The farm units namely Barbari Farm Unit, ICAR-CIRG, Makhdoom, Jamunapari Farm Unit, ICAR-CIRG, Makhdoom and Sirohi Farm Unit and ICAR-CSWRI, Avikanagar presented the progress report for the year 2017-2018 during the third session. A field visit to Gaddi nucleus breeding unit was also organised. Again, two new units namely Bundelkhandi goat unit, ICAR-IGFRI, Jhansi and Black Bengal goat unit, ICAR-RCER, Patna presented the outline of the work, village selection and general information regarding goats of the region.

The following recommendations were emerged during presentation in the form of suggestion and comments.

#### **MAJOR RECOMMENDATIONS:**

1. It is necessary to develop a template for different publications and make it uniform for all the units. Similarly details of technology development and technical specifications should be reported in a uniform format.
2. Milk nutrient profiling including mineral content of all the breeds should be carried out in collaboration with CIRG.
3. GMIS software database needs to be maintained in collaboration with IASRI, New Delhi and one IT-I professional may be deployed at IASRI for database maintenance, upgradation, and data analysis.
4. It has been suggested by the Hon'ble DDG that a brain storming session on future genetic improvement and profitable goat farming may be organised by the PC goat unit at CIRG. The eminent scientist/ faculty in this area of research may be invited.
5. Beetal breed of goat, a very important breed, need to be improved and conserved. It has been decided that the Beetal breed centre at GADVASU may be included, initially as non-funding centre of AICRP-G.
6. The Black Bengal breed centre at IVRI, Kolkata may also be included as non-funding centre.
7. Since the PC unit has to do lot of compilation of data and through monitoring, Dr. M.K. Singh, Principal Scientist (Animal Genetics and Breeding) may be included in PC- Unit team.
8. It is necessary to quantify the effect of technological intervention & how much each intervention is contributing towards income generation and sustainable goat production. The required expertise from the concerned ICAR institute may be taken in this regard.
9. Standard operating procedure (SOP) for data recording on growth and milk yield should be finalized at the earliest.
10. The DNA sample from high yielding animals as well as sire families should be collected as a DNA repository in PC unit.

11. It is necessary to estimate genetic gain over the years and flock productivity. Moreover, estimation of genetic parameters and selection differential should be carried out.
12. Baseline data and production system characterization should be carried out effectively and requisite number of bucks with breeding values should be maintained by each unit.
13. A refresher programme for all the principal investigators as well as other staffs of the unit should be organized regularly. Mid-term evaluation need to be carried out by PC Unit to monitor the progress.
14. Manpower pattern should be uniform in all the units and at least one data enumerator for one village on contractual basis should be appointed. The remuneration for enumerator will be Rs. 10,000/-per month or rate fixed by respective state government, whichever is higher.
15. Reporting to PC Unit should be carried out regularly within the time frame. Soft as well as hard copy of published research papers, patent information and product details should be provided by each unit to PC Unit at CIRG.
16. All the units need to publish more research paper in peer reviewed journals with high impact IF and should work towards technology development to provide solution to the problems of farmers in specific agro-ecological conditions.
17. Standardized region specific preventive health schedule and vaccination schedule should be developed by each unit and reported to PC unit for regular follow-up.
18. AUC should be submitted by each unit by the June 30 of every year.
19. Kisan Kalyan Abhiyan should be taken of in the tribal villages as per guideline of Council and TSP report should be reported separately by all the units.
20. The units should refund the unspent amount well in advance before February of each year, so that same will be refunded back to council.
21. All the centres should send the farmers and other project workers for exposure visit to ICAR-CIRG.
22. A common template for making power point presentations should be developed and circulated to all centres latest by September 30, 2018.
23. All the units of AICRP-G must work as per the assigned technical programme.

#### **UNIT-WISE RECOMMENDATIONS :**

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

The report was presented by Dr. Jai Sunder, PI of Andaman Goat Field Unit. Following recommendations have been made.

- i. Record milk production in all the adopted flocks.
- ii. Teresa goat should also be maintained at farm in addition to Andamani goats.
- iii. Genetic parameter estimation should be carried out.
- iv. Research output in term of publication and package of practices should be prepared.
- v. Provide the details of technology adopted by farmers.
- vi. The effort should be made to develop specific management strategy for goats during rainy season.
- vii. Baseline data and production system characterization should be carried out.

- viii. State the status of FAMACHA with respect to the unit.
- ix. Details of technology such as specification and prototype/ formulation should be reported to PC unit.
- x. DNA of all the high yielding animals needs to be stored at PC unit with details of production performance.
- xi. Estimation of breeding value of bucks distributed.
- xii. The performance of the unit was satisfactory.

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

The report was presented by Dr. N. Nahardeka, PI of Assam Hill Goat Field Unit, AAU, Khanpara Guwahati, Assam. Following recommendations have been made.

- i. The appropriate technologies should be demonstrated in the farmer's flock during different seasons.
- ii. Milk yield recording should be done.
- iii. Technology adoption rate needs to be calculated.
- iv. Region specific management plan during floods should be formulated.
- v. Buck number with breeding value should be reported in annual report.
- vi. Genetic parameter details should be provided.
- vii. Provide the details of technology adopted by farmers.
- viii. State the status of FAMACHA with respect to the unit.
- ix. Details of technology such as specification and prototype/ formulation should be reported to PC unit.
- x. DNA of all the high yielding animals needs to be stored at PC unit with details of production performance.
- xi. The performance of the unit was satisfactory.

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

The report was presented by Dr. Manorajan Roy, PI of Black Bengal Goat Field Unit, WBUAFS, Kolkata. Following recommendations have been made.

- i. The kids at 3 month of age should be screened for parasitic load and then deworming should be carried out.
- ii. Deworming should not be carried out at 1 month of age without observing worm load.
- iii. Final milk replacer formula should be submitted to PC unit with all the details.
- iv. State the status of FAMACHA with respect to unit.
- v. Research output in term of publications and package of practices should be done.
- vi. Technology adoption rate needs to be calculated.
- vii. Details of technology such as specification and prototype/ formulation should be reported to PC unit.
- viii. DNA of all the high yielding animals needs to be stored at PC unit with details of production performance.
- ix. The performance of the unit was satisfactory.

**4. Black Bengal Field Unit, BAU, Kanke, Ranchi, Jharkhand**

The report was presented by Dr. Sushil Prasad, PI of Black Bengal Field Unit, Ranchi. Following recommendations have been made.

- i. Baseline data should be prepared.
- ii. Per doe productivity needs to be calculated.
- iii. Income from goat rearing needs to be reanalysed & submitted to PC Unit within 2 months.
- iv. Research output in term of publications and package of practices should be reported.
- v. Genetic parameter estimation needs to be carried out.
- vi. Technology adoption rate needs to be calculated.
- vii. Estimation of breeding value for selected bucks needs to be done.

- viii. State the status of FAMACHA with respect to the unit.
- ix. Details of technology such as specification and prototype/ formulation should be reported to PC unit.
- x. DNA of all the high yielding animals needs to be stored at PC unit with details of production performance.
- xi. The performance of the unit was satisfactory.

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

The report was presented by Dr. Feroz Seikh, PI of Changthangi Goat Field Unit. Following recommendations have been made.

- i. Select the bucks based on selection criterion i.e. pashmina yield at 18 month of age.
- ii. Details of selection criteria for pashmina goat should be sent to PC Unit. Selection should be carried out based on selection criteria developed by the unit.
- iii. Develop low cost technologies and management practices suitable for nomads and village based goat farmers.
- iv. Cluster wise breed distribution needs to be reported.
- v. Milk record data should be reported
- vi. Milk yield recoding should be carried out.
- vii. Provide migration Map
- viii. State the status of FAMACHA with respect to unit.
- ix. Details of technology such as specification and prototype/ formulation should be reported to PC unit.
- x. DNA of all the high yielding animals needs to be stored at PC unit with details of production performance.
- xi. The performance of the unit was satisfactory.

**6. *Gaddi Field Unit, HPKV, Palampur, Himachal Pradesh***

The report was presented by Dr. P. K. Dogra, PI of Gaddi Field Unit, HPKV, Palampur, Himachal Pradesh. Following recommendations have been made.

- I. Breeding value of the bucks should be estimated & reported to PC unit.
- ii. Research output in term of publications and package of practices should be carried out.
- iii. Estimation of breeding value of distributed bucks. Milk yield needs to be recorded with precision.
- iv. Genetic parameter estimation needs to be carried out.
- v. Technology adoption rate needs to be calculated.
- vi. State the status of FAMACHA with respect to the unit.
- vii. Details of technology such as specification and prototype/ formulation should be reported to PC unit.
- viii. DNA of all the high yielding animals needs to be stored at PC unit with details of production performance.
- ix. The performance of the unit was satisfactory.

**7. *Ganjam Field Unit, OUAT, Bhubaneswar, Orissa***

The report was presented by Dr. D. K. Karna, PI of Ganjam Field Unit. Following recommendations have been made.

- i. Milk recording should be carried out with higher precision.
- ii. Milk yield detail needs to be provided.
- iii. Higher number of trainings needs to be organized for stake holders.
- iv. Calculate per doe productivity over the years.
- v. Specific intervention based success story needs to be developed.

- vi. Research output in term of publications and package of practices should be carried out.
- vii. Technology adoption rate needs to be calculated.
- viii. Genetic parameter estimation needs to be carried out.
- ix. Estimation of breeding value of selected bucks should be reported.
- x. State the status of FAMACHA with respect to the unit.
- xi. Details of technology such as specification and prototype/ formulation should be reported to PC unit.
- xii. Hard copies of the research papers need to be submitted to PC Unit.
- xiii. DNA of all the high yielding animals needs to be stored at PC unit with details of production performance.
- xiv. Performance of the unit needs to be improved.

**8. *Himalayan Goat Field Unit, ICAR-IVRI Campus, Mukteswar, Uttarakhand***

The report was presented by Dr. C. K. Jana, PI of Himalayan Goat Field Unit. Following recommendations have been made.

- i. Mapping of fodder trees and grasses in the area needs to be done.
- ii. Mapping of operational area and the breed habitat has to be done.
- iii. Proper documentation of biomass availability in the migratory route needs to be done.
- iv. Operational area and breeding tract of the breed needs to be specified.
- v. Baseline data should be generated and submitted to PC Unit.
- vi. Tagging of the animals needs to be carried out within 6 months.
- vii. Characterization of goat production system has to be done and details to be provided to PC Unit.
- viii. Estimation of breeding value of bucks distributed to be done.
- ix. State the status of FAMACHA with respect to unit.
- x. Details of technology such as specification and prototype/ formulation should be reported to PC unit.
- xi. Work needs to be carried out in farmer's flocks.
- xii. DNA samples of all high yielding animals needs to be preserved.
- xiii. Performance of the unit needs to be improved.

**9. *Malabari Field Unit, KV&ASU, Mannuthy, Thrissur, Kerala***

The report was presented by Dr. Thirupathy Venkatachalapathy, PI of Malabari Field Unit, Thrissur presented the report. Following recommendations were made.

- i. The unit needs to add some more farmers to increase population size.
- ii. Research output in term of publications and package of practices should be done.
- iii. Technology adoption rate needs to be calculated.
- iv. Buck number with EBV should be reported.
- v. State the status of FAMACHA with respect to the unit.
- vi. Technology details of body weight traits should be provided.
- vii. Details of technology such as specification and prototype/ formulation should be reported to PC unit.
- viii. DNA of all the high yielding animals needs to be stored at PC unit with details of production performance.
- ix. The performance of the unit was satisfactory.

**10. *Marwari Field Unit, RAJUVAS, Bikaner, Rajasthan***

The report was presented by Dr. G. C. Gahlot, PI of Marwari Field Unit. Following recommendations have been made.

- i. Buck number with estimated breeding value needs to be reported.
- ii. Data need to be checked and reanalysis is required.
- iii. Genetic parameter estimation needs to be carried out.
- iv. All the adopted animals should be tagged for accurate data recording.
- v. Research output in term of publications and package of practices should be carried out.
- vi. Technology adoption rate needs to be calculated.
- vii. Estimation of breeding value of buck distributed to be done and to be reported.
- viii. State the status of FAMACHA with respect to the unit.
- ix. Details of technology such as specification and prototype/ formulation should be reported to PC unit.
- x. DNA of all the high yielding animals needs to be stored at PC unit with details of production performance.
- xi. The data may be checked to bring out the effective conclusions.
- xii. The performance of the unit needs to be improved.

**11. *Osmanabadi Goat Field Unit, NARI, Phaltan, Maharashtra***

The report was presented by Dr. Chanda Nimbkar, PI of the project. Following recommendations were made.

- i. Provide the details of technology adopted by framers.
- ii. Method of selection of bucks needs to be given.
- iii. Technology details of tick control method, frozen semen standard should be provided.
- iv. Photograph of distributed bucks should be kept.
- v. More number of animals needs to be adopted in different clusters.
- vi. Research output in term of publications and package of practices should be carried out.
- vii. Technology adoption rate needs to be calculated.
- viii. State the status of FAMACHA with respect to the unit.
- ix. Details of technology such as specification and prototype/ formulation should be reported to PC unit.
- x. DNA of all the high yielding animals needs to be stored at PC unit with details of production performance.
- xi. The performance of the unit was satisfactory.

**12. *Sangamneri Goat Field Unit, MPKV, Rahuri, Maharashtra***

The report was presented by Dr. Sanjay Mandakmale, PI of Sangamneri Goat Field Unit. Following recommendations were made.

- i. Purity of breed needs to be assessed under field conditions.
- ii. Research output in term of publications and package of practices should be carried out.
- iii. Technology adoption rate needs to be calculated.
- iv. Estimation of breeding value for buck distributed to be done.
- v. Technology details needs to be provided.
- vi. Trend for reproductive traits should be repeated.
- vii. State the status of FAMACHA with respect to the unit.
- viii. Details of technology such as specification and prototype/ formulation should be reported to PC unit.
- ix. DNA of all the high yielding animals needs to be stored at PC unit with details of production performance.
- x. Performance of the unit was satisfactory.

**13. Sirohi Field Unit, RAJUVAS, Vallabhnagar, Rajasthan**

The report was presented by Dr. R.K. Nagda, PI of Sirohi field unit. Following recommendations were made.

- I. Ensure purity of breed in the field/ adopted flocks.
- ii. Provide range for all body weight and milk yield traits.
- iii. Breeding value of the buck distributed need to be provided.
- iv. Research output in term of publications and package of practices should be carried out.
- v. Technology adoption rate needs to be calculated.
- vi. Estimation of breeding value for buck distributed to be done.
- vii. State the status of FAMACHA with respect to the unit.
- viii. Details of technology such as specification and prototype/ formulation should be reported to PC unit.
- ix. Baseline data and production system characterization needs to be reported.
- x. DNA of all the high yielding animals needs to be stored at PC unit with details of production performance.
- xi. The performance of the unit was satisfactory.

**14. Surti Goat Field Unit, N.A.U., Navsari, Gujarat**

The report was presented by Dr. K.K. Tyagi, PI of the Surti Goat Field unit. Following recommendations were made.

- i. No work has been carried in farmer's flocks during the year.
- ii. Breeding value of buck distributed should be reported to PC Unit.
- iii. Include standard deviation for each trait in table.
- iv. Coefficient of variation should be calculated.
- v. Purity of breed may be ascertained and programme should be implemented effectively.
- vi. Genetic parameter analysis should be carried out.
- vii. Research output in term of publications and package of practices should be carried out.
- viii. Technology adoption rate needs to be calculated.
- ix. Presentation should be as per the guidelines provided by PC Unit.
- x. State the status of FAMACHA with respect to the unit.
- xi. Details of technology such as specification and prototype/ formulation should be reported to PC unit.
- xii. DNA of all the high yielding animals needs to be stored at PC unit with details of production performance.
- xiii. Performance of the unit needs to be improved.

**15. Uttarakhand Goat Unit, GBPUA&T, Pantnagar, Uttarakhand**

The report was presented by Dr. R. K. Sharma, PI of the Uttarakhand Goat Unit. Following recommendations were made.

- i. All the registered animals in adopted villages should be tagged.
- ii. The unit should increase its operational area.
- iii. Data should be presented with CV and range value of parameters.
- iv. Technology adoption rate needs to be calculated.
- v. Estimation of breeding value for buck distributed to be reported.
- vi. Technology adoption rate needs to be calculated.
- vii. State the status of FAMACHA with respect to the unit.
- viii. Details of technology such as specification and prototype/ formulation should be reported to PC unit.
- ix. DNA of all the high yielding animals needs to be stored at PC unit with details of production performance.



- x. Performance of the unit needs to be improved.

**16. *Barbari Farm Unit, ICAR-CIRG Makhdoom, Makhdoom, Farah, Mathura***

The report was presented by Dr. M.K. Singh, PI of Barbari unit. The comparative performances over the years were presented. Following recommendations were made.

- i. Doe productivity over the years needs to be estimated.
- ii. Research output in term of publications and package of practices should be carried out.
- iii. Developing goat based agri-business models/multiplier flocks to strengthen for genetic improvement, validation of technologies and raising farmer's income.
- iv. Technology adoption rate needs to be calculated in field.
- v. Estimation of breeding value for buck distributed to be done.
- vi. Genetic parameter analysis should be carried out.
- vii. State the status of FAMACHA with respect to unit.
- viii. Details of technology such as specification and prototype/ formulation should be reported to PC unit.
- ix. DNA of all the high yielding animals needs to be stored at PC unit with details of production performance.
- x. The performance of the unit was satisfactory.

**17. *Jamunapari Farm Unit, ICAR-CIRG, Makhdoom, Farah, Mathura***

The report was presented by Dr. M. S. Dige, Co-PI of the project. The comparative performances over the years were presented. Based on the discussions following recommendations were made.

- i. Doe productivity over the years needs to be estimated.
- ii. Selection differential need to be reported in case of specialized sire and dam line.
- iii. Publication and research output in term of publications and package of practices should be carried out.
- iv. Multiplier flocks of Jamunapari goats need to be encouraged.
- v. State the status of FAMACHA with respect to the unit.
- vi. Details of technology such as specification and prototype/ formulation should be reported to PC unit.
- vii. DNA of all the high yielding animals needs to be stored at PC unit with details of production performance.
- viii. The performance of the unit was satisfactory.

**18. *Sirohi Farm Unit, ICAR-CSWRI, Avikanagar, Rajasthan***

The report was presented by Dr. S. S. Misra, PI of the Sirohi farm unit. The following recommendations were made.

- i. Sire line needs to be analyzed and maintained.
- ii. Research output in term of publications and package of practices should be carried out.
- iii. Estimation of breeding value for buck distributed needs to be done.
- iv. Ten bucks should be provided to Sirohi Field Unit, Vallabhnagar under TSP programme.
- v. State the status of FAMACHA with respect to the unit.
- vi. Details of technology such as specification and prototype/ formulation should be reported to PC unit.
- vii. DNA of all the high yielding animals needs to be stored at PC unit with details of production performance.
- viii. *The performance of the unit was satisfactory.*

## LIST OF PARTICIPANTS

S. No	Name of Participants
1.	Dr. J. K. Jena, DDG (AS), ICAR, ICAR, New Delhi
2.	Dr. R. S. Gandhi, ADG (AP&B), ICAR, New Delhi
3.	Dr. M. S. Chauhan, Director ICAR-CIRG, Makhdoom, Mathura
4.	Dr. P. K. Rout, I/C AICRP, CIRG, Makhdoom, Farah, Mathura
5.	Dr. Mahesh Dige, Scientist, PC Unit, ICAR-CIRG, Makhdoom, Farah, Mathura
6.	Dr. M. K. Singh, Barbari Farm Unit, ICAR-CIRG, Makhdoom, Farah, Mathura
7.	Dr. S.S. Misra, Sirohi Farm Unit, ICAR-CSWRI, Avikanagar, Rajasthan
8.	Dr. G.C. Gahlot, Marwari Field Unit, RAJUVAS, Bikaner, Rajasthan
9.	Dr. Manorajan Roy, Black Bengal Goat Field Unit, WBUV and FS, Kolkata, West Bengal, Kolkata
10.	Dr. Dillip Kumar Karna, Ganjam Field Unit, OUAT, Bhubaneswar, Orissa
11.	Dr. Sanjay Mandakmale, Sangamneri Goat Field Unit, MPKV, Rahuri, Maharashtra
12.	Dr. K. K. Tyagi, Surti Goat Field Unit, N.A.U., Navsari, Gujarat
13.	Dr. Thiruparthi Venkatechalapathy, Malabari Field Unit, KV&ASU, Mannuthy, Thrissur, Kerala
14.	Dr. R. K. Nagda, Sirohi Field Unit, RAJUVAS, Vallabhnagar, Rajasthan
15.	Dr. Chanda Nimbkar, Osmanabadi Goat Field Unit, NARI, Phaltan, Maharashtra
16.	Dr. N. Nahardeka, Assam Hill Goat Field Unit AAU, Khanpara, Guwahati, Assam
17.	Dr. P. K. Dogra, Gaddi Field Unit, HPKV, Palampur, Himachal Pradesh
18.	Dr. Sushil Prasad, Black Bengal Field Unit, BAU, Kanke, Ranchi, Jharkhand
19.	Dr. Jai Sundar, Andaman Goat Field Unit, ICAR- CIARI, Port Blair, Andaman & Nicobar Island
20.	Dr. R.K. Sharma, Uttarakhand Goat Unit, GBPUA&T, Pantnagar, Uttarakhand
21.	Dr. C. K. Jana, Himalayan Goat Field Unit, ICAR-IVRI Campus, Mukteswar, Uttarakhand
22.	Dr. F. D. Sheikh, Changthangi Goat Field Unit, SKUAST, Kashmir, Leh-Ladakh, Jammu & Kashmir
23.	Dr. V.B. Kharadi, Surti Goat Field Unit, N.A.U., Navsari, Gujarat
24.	Dr. P.C. Chandran, Black Bengal Goat Unit, ICAR, Patna
25.	Dr. Pradeep Ray, Black Bengal Goat Unit, ICAR, Patna

## Multiplier Flock (Seed Unit) of Barbari Goats developed under AICRP on Goat Improvement form 2014-19

Sr.No	Name of Multiplier Flocks owners	Address	Flock Size	Establishment year
1.	Shri Vivek Singh	C-12, Nrway Nagar, Gailana Road Agra. U.P.-282007 Mob.No.08410005505	275-300	2014
2.	Shri Sandeep Kumar	Village- Fatiha, P.O- Farah, Mathura (U.P) Pin Code-281122,Mob.No. 08477079530	150-175	2014
3.	Shri Aditya Chaudharry	Vill & Post- Balrai, Distt. Etawa, (U.P)206245 Mob.No. 9412349751	75-85	2014
4.	Shri Radhey Shyam	Vill- Baragoun, Kunjpura, Distt. Karnal, Hariyana.Pin Code-132001 Mob.No. 09541221313	220-245	2014
5.	Shri Vivek Singh	Residence-359, Insaf Nagar, Indira Nagar, Lucknow, - 226016, Mob.No. 9919902906	115-150	2015
6.	Smt. Bhu Devi	Vill & Post- Farah, Distt. Mathura (U.P)Pin Code-281122,Mob.No. 74409398835	35-65	2015
7.	Shri Sandeep Singh	Vill & Post- Mohmadpur, Distt. Barabanki Pin Code-225303, Mob.No.9919902906	80-100	2015
8.	Mohmad Rashid Ulhuke	Jaisighpura, Mathura (U.P) Pin Code-281003, Mob.No. 9045742997	250-350	2015
9.	Rohan Singh	Salempur, Mathura	45-55	2016
10.	Shri Devrath Kuswaha	Deen Dayal Nagar Makhdoom, Farah, Mathura (U.P) 9456812828	80-100	2016
11.	Shri Jai Prakash Sharma	Vill & Post- Bhdawar, Mauranipur Jhanshi (U.P)-284204, Mob.No. 09415944138	75-80	2016
12.	Shri Sandeep Kumar	Vill & Post- Mainikhurd, Distt. Karnal, Hariyana Pin Code-132001 Mob.No. 996407780	65-70	2016
13.	Shri Rajveer Singh	Vill & Post- Amirtpur, Distt. Karnal, Hariyana 132114, Mob.No.7056542152	50-60	2016
14.	Shri Pramod Kumar	Vill- Bapora, Kunjpura, Distt. Karnal, Hariyana- 132022, Mob.No. 9813352010	55-60	2016
15.	Harendra Kumar Singh	Vodha Ashram Road Firozabad Pin Code-283203, Mob.No. 9997866014	60-70	2016
16.	Praveen Kumar & Raghuveer Singh	Nagala Aman Firojabad Pin- 283203, Mob.No. 9997599910	50-60	2016
17.	Sohan Singh	Vill- Baragoun, Kunjpura, Distt. Karnal, Hariyana-132023, Mob.No. 9416154792	50-55	2017
18.	Shekh Arashad	895 Taj Compound Jhansi Pin Code-284003,Mob.No. 9453908111	130-150	2017
19.	Naeem Qureshi	Vyapari Mohalla, Farah, Mathura Mob.No. 9719807079	75-85	2018
20.	Ms Yasmin W/o Ziaulhaq	HN: 217/433, BagKaziyan, Bhooteswar Mathura	15-20	2016
21.	Shri Ajay Kumar	Vill-Post- Bibipur, Pehwa, Distt. Kurushetra, Hariyana-136128 Mob.No. 839890400	80-110	2017

22.	Bipin Kumar Jha	Patna, Bihar Mob.No. 9431094469	75-100	2018
23.	Prasant K Singh	Bhamboo, Kisanpur, Mahavan Mathura	45-65	2018
24.	Mohammad Mustafa Khan	Near civil Court, Bulandshahr	185-200	2018
25.	Shri Satish Kumar	Vill-Mazarikala, Post-Santinagar, Distt. Kurushetra, Hariyana-136136 Mob.No. 7357073388	40-60	2018
26.	Shri Ram S/o Shri Roshan Singh	House No. 596, Dashmesh Nagar, Girakpur, Punjab, Chandigarh -140603 Mob.No. 7988450584	25-30	2018
27.	Shri Praveen Kumar	Vill-Badupur, Post-Dhochana, Distt. Mahendra Nagar, Hariyana, Pin Code- 123001, Mob.No. 7027273537	4-50	2018
28.	Shri Bihu Kumar	Vill & Post- Grora, Distt-Karnal, Hariyana Pin Code-132001	40-50	2018
29.	Shri Vedpal Singh	Vill & Post- Bahari, Distt-Karnal, Hariyana Pin Code-132037	45-50	2018
30.	Shri Satish Kumar	Vill & Post- Bahari, Distt-Karnal, Hariyana Pin Code-13237, Mob.No. 7357073358	25-40	2018
31.	Vinod kumar Chauhan	Vill & Post- Bhauvala, Dist- Deharadoon Pin Code-248007, Mob.No. 9917937777	45-60	2018
32.	Dheeraj kumar	Vill – Hathipura , Post- Pipla Distt- Bhartpur ,Rajasthan -321027, Mob.No. 9759976738	45-50	2018
33.	Rajesh Kumar Singh	40 Avadhपुरी Lajpat Nagar Maholi, Mathura Pin Code-281004 Mob.No. 9411063849	80-100	2018
34.	Alim Mohammed Khan	Bulandshahr Mob.No. 8755626211	65-90	2018
35.	Hari Mohan Prabhakar	Amroha, U.P., Mob.No. 9811601205	55-65	2018
36.	Mohammed Aslam Khan (Goat based integrated organic farming)	Chhanhera, Badaukhar, Banda, Bundelkhand (UP)	15-25	2018
37.	Vikas Rana	Baragaon, Karnal Mob.No. 9813201234	35-45	2018
38.	Rinki kumari (School teacher)	Vill- Shekhupur Ajeet, Salempur Dist – Hathras(UP)-204102 Mob.No. 8266813953	15-20	2019
39.	Umer Mustafa Khan	Civil line, Bulandshahr Mob.No. 9997680033	75-90	2018
40.	Pranvir Singh	Pratap Nagar, Maholi Road, Mathura Mob.No.9411063849	40	2019
41.	Santosh Mohan (Farm Established in Bulandsahar)	House No. 568-C, 1 <sup>st</sup> Floor, School Block, Shakarpur, East Delhi, Mob.93129855233	45	2019
42.	Saqil Kuraishee S/O Haji Sattar	Vyapari Mohalla, Farah Mathura	20-30	2019
43.	Raghvendra H Goda	Shri venkateshwara Goat Farm, Davangere distt, Karnatka Mb. No 9013596136	20-30	2019



**AICRP TEAM**



## **PROJECT COORDINATOR UNIT**

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

**ICAR-Central Institute for Research on Goats**

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