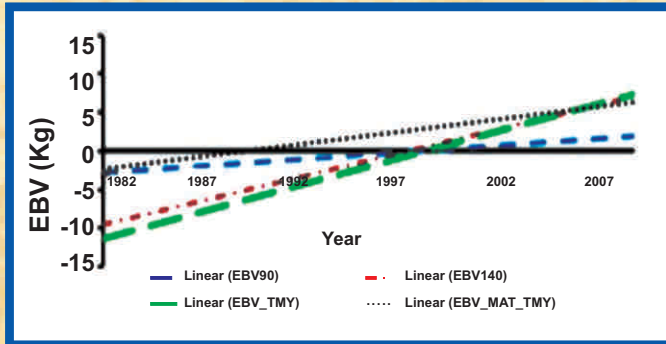


अखिल भारतीय बकरी सुधार समन्वयक शोध परियोजना

All India Coordinated Research Project on Goat Improvement



PROJECT COORDINATOR'S REPORT 2016-17



भा.कृ.अ.प. - केन्द्रीय बकरी अनुसंधान संस्थान

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Details of Cover Page :

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- 2. Goat Providing Livelihood Security to farmers**
- 3. Goat Production Management Information System**
- 4. Farmers Centric Distribution**
- 5. PC Unit Website Home Page**



**अखिल भारतीय बकरी सुधार
समन्वयक शोध परियोजना**

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



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2016-17**

**P. K. Rout
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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 animal as well as conservation of the germplasm in their natural habitat. Presently AICRP on goat improvement is working with 13 registered goat breeds and three local genotypes. AICRP on goat improvement is also working in three breeds namely Barbari, Jamunapari, and Sirohi in semi-intensive system of rearing as farm units.

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

Table 1 : Coordinating Centers of AICRP on Goat Improvement

| S.N. | Field Units | Locations | TSP / NEH | Purpose |
|-------------------------------------|-----------------------------------|---|---------------|--------------|
| A) Field Units | | | | |
| 1. | Andaman Goat Field Unit | ICAR-CIARI, Port Blair, A&N Island | Island Region | Meat |
| 2. | Assam Hill Goat Field Unit | AAU, Khanpura, Guwahati, Assam | NEH | Meat |
| 3. | Bengal Goat Field Unit | BAU, Kanke, Ranchi, Jharkhand | Partially TSP | Meat |
| 4. | Black Bengal Goat Field Unit | WBUV and FS, Kolkata, West Bengal | Partially TSP | Meat |
| 5. | Changthangi Goat Field Unit | SKUAST, Kashmir, Leh-Ladakh, J&K | Partially TSP | Fibre & Meat |
| 6. | Gaddi Goat Field Unit | HPKV, Palampur, Himachal Pradesh | Partially TSP | Meat & Fibre |
| 7. | Ganjam Goat Field Unit | OUAT, Bhubaneswar, Orissa | | Meat |
| 8. | Himalayan Local Goat Field Unit | ICAR-IVRI Campus, Mukteshwar, Uttarakhand | | Meat |
| 9. | Malabari Goat Field Unit | KV&ASU Mannuthy, Thrissur, Kerala | | 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 | Partially TSP | Meat |
| | Surti Goat Field Unit | | Partially TSP | Meat & Milk |
| 15. | Uttarakhand Local Goat Field Unit | GBUPA&T, Pantnagar, Uttarakhand | | Meat |
| B) Farm Units | | | | |
| 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 |
| C) Project Coordinating Unit | | | | |
| 1. | Project Coordinator Unit | ICAR-CIRG, Makhdoom, Uttar Pradesh | | |

Six 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- Laddakh region of Jammu & Kashmir for conducting research on goats producing Pashmina in cold desert 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 breeder goats, technology transfer, creation of knowledge base, application of health management practices for enhancing production potentials on sustainable basis.

1.1 OBJECTIVES & 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.

Major Activities for the XII Plan (2012-2017)

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

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

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

1.2 ACTION TAKEN REPORT ON

Major Recommendations of XVI Annual Review Meet of AICRP on Goat Improvement at College of Veterinary and Animal Sciences, KVASU, Mannuthy, Trissur, Kerala-680651 on May 11-12, 2016

| S. No. | Recommendations | Action Taken (Please quantify your Details) |
|--------|--|--|
| 1. | Management intervention should be worked out to increase the weaning weight, to increase weight at mating and to control the abortion problem in the farmer's flock | - Details submitted by 10 Units - Complete details are not submitted by 5 Units - ATR not submitted by Uttarakhand Goat Unit, Surti Goat Unit, Navsari. |
| 2. | Goat keeper centric requirements such as LED torch, shoes, mosquito net, water bottle, shoes, umbrella and other daily required items need to be provided | - Following Units carried out : Assam Hill Goat Unit, Andaman Goat Unit, Black Bengal Kolkata, Gaddi Goat Unit, Malabari Goat Unit, Sirohi Field Unit, Ganjam Goat Unit, Marwari Goat Unit. - Units like Black Bengal Ranchi, Osmanabadi, Sangamneri Goat Unit did not carry out the activity. - Rest of the units did not provide any information in this regards |
| 3. | Efforts should be made in the direction of linking up of registered farmers with value chain | - Seven units have successfully carried out the activity while 3 units have initiated the work of linking up of farmers. |
| 4. | There is a need to take up collaborative research work and publishing the research papers involving all the in charges of AICRP | - Thirteen units have carried out the collaborative research work. - Rest of the unit did not respond. |
| 5. | All the units should follow the new health management proforma and reporting will be done as per the format | - All the units have adopted the new health management proforma. |
| 6. | Tagging of all the animals should be a regular activity and tagging with year of birth, month of birth will provide an edge for the data recording under field conditions. | - Total 12344 taggings were done out of 9 units. - Changthangi goat unit, Black Bengal goat, Ranchi did not provide the quantitative details - Himalayan goat unit, Surti goat unit, Navsri, Uttarakhand goat unit did not provide the details. |
| 7. | During the kidding season, the field staff should be in regular contact I visit the flocks daily for close monitoring and providing assistance and recording of data | All units are visiting the the flocks daily/weekly |
| 8. | Buck distribution / exchange among field flocks of different clusters should be done regularly on yearly basis and preferably a buck should not be used in one flock for more than two major breeding seasons. | - Total 396 Buck distributed / exchanged among field flocks of different clusters by 12 units. Himalayan goat unit did not carried out the work - Surti goat unit, Navsari, Uttarakhand goat unit did not provided the details. |
| 9. | Conduct training / awareness programmes for goat keepers. PI should organize one awareness camp in each cluster every month. | - Total Training conducted: 67 by 9 units - Awareness Camp conducted: 86 by 8 units - Collaborative programme: 05 by Sangamneri goat unit only - Exposure visit: 08 by 3 units only |

| | | |
|-----|--|--|
| 10. | Preventive health care such as vaccination and deworming should be carried out regularly and maintain records of all the activities undertaken in each farmer's flock. | - Deworming: 32,046 animals & Vaccination: 36,166 animals as reported by the units |
| 11. | Baseline data on available resources, practices and production systems to be collected for different clusters in the next 3 months and the report should be submitted to the coordinating unit | - Only 12 units have submitted their baseline data. |
| 12. | The center should initiate identification and rearing of young males in farmer's flock and provide necessary inputs to farmers who have shown keen interest in this practice. | - Followed by all the units. |
| 13. | Milk recording should be initiated immediately in all the field flocks | - Followed by all the units. Andaman, Assam Hill goat, Gaddi and Himalayan goat unit did not carry out the work. |
| 14. | Strategic supplementation like mineral blocks, rock salt licks. etc. should be provided to each flock | - Provided by Malabari, Gaddi & Andaman goat units. Other units have not provided details. |
| 15. | Co-PI from health, Nutrition; LPM stream may be included in the project for imparting training in areas of production system characterization, health care and organizing awareness programmes. | - Followed by all the units except Marwari goat unit, Bikaner |
| 16. | The PI of the project should make efforts to form a registered cooperative of the registered goat keepers under the project | - Initiative has taken by Surti, Sangamneri & Ganjam goat unit. |
| 17. | The field staff may be provided digital weighing balances of maximum 50 kg capacity for proper weighing of animals and also provide plastic milk feeding bottles for kid feeding. The balance needs to be calibrated every year. | - Followed by all the units. |
| 18. | Documents on Package of Practices for the breed/ agro-climatic zones should be developed for back yard goat rearing, semi-intensive goat rearing and intensive goat rearing | - Already it's being followed by all the units. |
| 19. | Targeted deworming approach should be adopted by each unit, therefore all the PIs should standardize FAMACHA test for each agro-climatic zone | - It is being carried out & need to be developed during this year |
| 20. | Data pertaining to production and reproduction since inception of the project should be uploaded on GMIS software before Sept. 2016 | - Report has been sent to DDG (AS) depicting the upload status in GMIS. Failure of which, letter has been sent to the concerned VCs and Dir. Of Research regarding immediately upload the data. |
| 21. | Second instalment will not be released before getting final AUC from the units | - Strictly installments are sent only after receiving monthly expenditure statement from concerned units. |
| 22. | Highlight the other activities such as Best Practices, Success Stories, Package of Practices of each unit on ICAR, CIRG, AICRP, GMIS websites | - A booklet of success stories of all AICRP on Goat centers has been published. - A paper entitled "Goat: contributing livelihood security of farmer in different parts of India" is also prepared. |
| 23. | There should be linkage between Sirohi Farm Unit, | - No initiative during the year. |

| | | |
|-----|--|---|
| | Avikanagar and Sirohi Goat Field Unit, Vallabhnagar to exchange bucks for free of cost. | - Deworming: 32,046 animals & |
| 24. | Manpower pattern should be uniform in all the units and should be appointed at least one data enumerator for one village on contractual basis. The remuneration for enumerator will be ₹. 8000/-per month or as per minimum rate fixed by state government /university | - Uniform manpower pattern has been approved by the competent authority. The same will be practiced from the next plan. |
| 25. | All units have to take up new selection objectives and have to carry out the programme in modified manner | - It was instructed to all the unit incharges during the mid-term review meeting sept 2016 |
| 26. | A feasibility study on goat skin quality will be carried out by CIRG scientists within 3 months and should apprise to Council | - The work is being carried out at CIRG. |
| 27. | As the project will be completing by March, 2017, therefore a mid-term review will be held at CIRG during September, 2016. - All the units will present the details of their work done during last 10 years (as applicable). - Analyze the achievement, impact evaluation and lesson learnt during the period. - Formulating the action for the next phase. | - A mid-term review meeting was held during September 2016 in which analysis of last 10 years achievement, impact evaluation and lesson learnt during the period were discussed. Also SFC sensitization |
| 28. | Registered farmer's name along with mob. No. and Adhar no. should be immediately uploaded on GMIS Software. | - A total 4615 registered farmer details along with mobile no. and Aadhar no. has been updated into GMIS. |

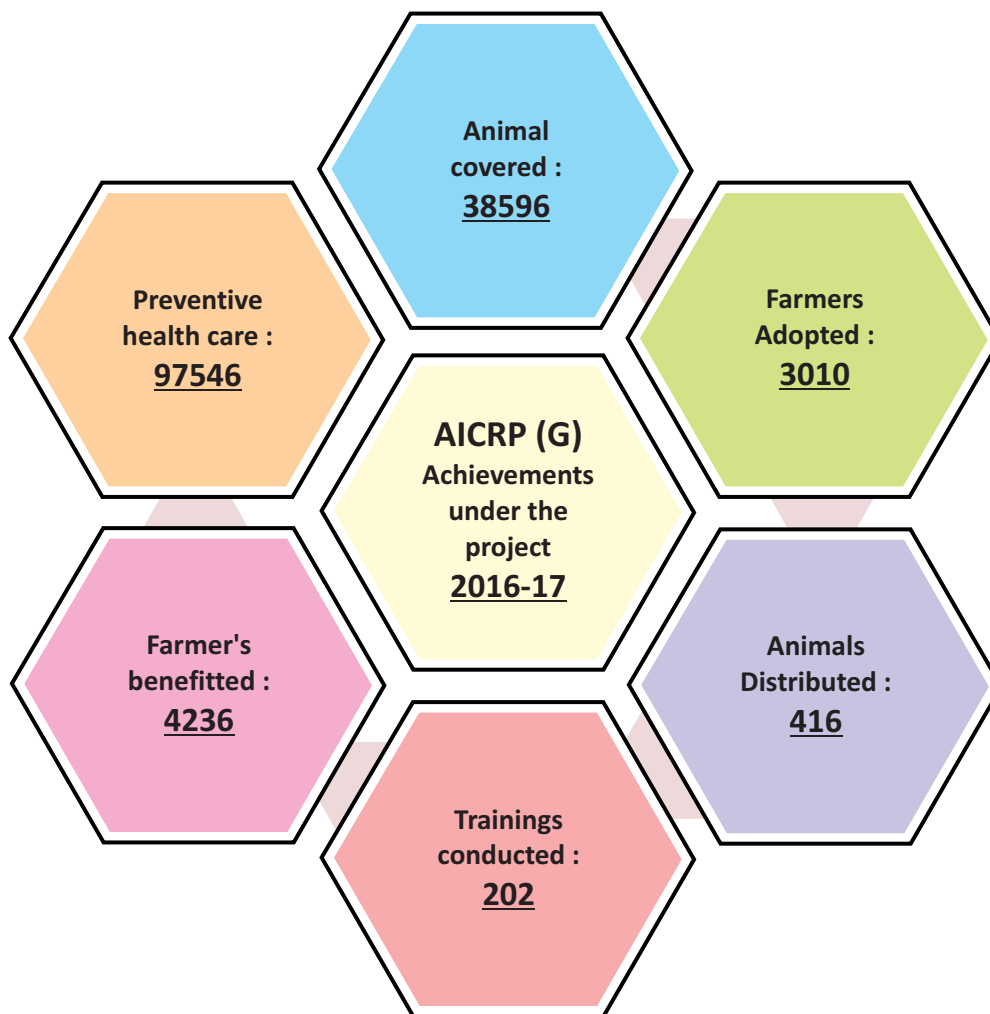
1. 3 (a) SALIENT RESEARCH ACHIEVEMENT 2016-17

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

- i. AICRP on Goat Improvement is operational at 461 villages covering 3840 farmers. The performance recording was carried out in animals during the year.
- ii. The increase in body weight at 12-month age over the units varied from 0.38% to 32.12%. Similarly, the increase in milk yield at 90 days varied from 3.35 to 48.85% over the units.
- iii. The average pashmina production of Changthangi goats was 275 ± 12.54 gram.
- iv. The farm based units namely Jamunapari, Barbari and Sirohi are working as best model for in-situ conservation in the natural home tract of the breed.
- v. Preventive health care was provided to animals. The health care is being taken up sincerely in farmer's flock indicating that the mortality rate varied from 3.8 to 7.9%. This has not only contributed for increasing population growth but also improving the farmer's income by 22% to 35%. A higher population growth amongst breeds resulted into increased selection intensity, thus realized genetic gains could be high.
- vi. Farm unit have significantly produced and distributed more than 462 improved animals to different agencies for breed improvement as well as up-gradation of local germplasm.
- vii. The field units also distributed improved bucks to adopted farmers for genetic improvement.
- viii. AICRP units conducted 202 training programme for skill development of goat farmers and about farmers participated in various training programmes.
- ix. Producing technical literature & seasonal advisory for goat farmers to impart better known- how to manage their flocks during the year.
- x. Identification of elite doe producing more than 200 litre of milk in 140 days in different units.
- xi. Different units have produced 40 technical leaflets/booklets on different managerial practices.
- xii. Twenty success stories have been recorded during the period.
- xiii. AICRP on Goat Improvement has bagged Breed survivor recognition for Malabari, Jamunapari and Surti.
- xiv. Working in 13 tribal villages and contributing for a better livelihood in the tribal region. Goats as major source of income generation to poor people in Tribal areas and NEH region. The technical inputs have contributed in different aspect of goat production and increasing the income of goat farmers.


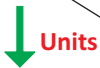













xv. Technological interventions under the project have benefited more than 3800 goat rearing families in different units over thirteen states of the country. It has provided average employment ranging from 80 to 140 man days and has improved income of farmers significantly in different units.

xvi.



The overall achievement for the project during 2016 - 17

1. 3 (b) DETAILS OF FARMER CENTRIC DISTRIBUTION

|   |  |  |  |  |  |  |  |  | Other Daily Requirements | | | | |
|--|---|---|---|---|---|---|---|--|--------------------------|---|---|---|-----|
| |  |  |  |  |  | | | | | | | | |
| Andaman Local Goat Unit | 0 | 0 | 0 | 0 | 0 | 10 | 160 | 55 | 0 | 0 | 0 | 0 | 0 |
| Assam Hill Goat Unit | 4 | 4 | 4 | 4 | 4 | 0 | 0 | 0 | 4 | 4 | 0 | 0 | 0 |
| Bengal Goat Unit, Ranchi | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Bengal Goat Unit, Kolkata | 0 | 0 | 68 | 0 | 68 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Changthangi Goat Unit | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Gaddi Goat Unit | 8 | 14 | 0 | 6 | 12 | 0 | 0 | 0 | 0 | 0 | 6 | 3 | 0 |
| Ganjam Goat Unit | 62 | 0 | 62 | 60 | 62 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Himalayan Local Goat Unit | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Malabari Goat Unit | 0 | 0 | 0 | 50 | 50 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 190 |
| Marwari Goat Unit | 0 | 0 | 0 | 50 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Osmanabadi Goat Unit | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sangamneri Goat Unit | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sirohi Goat Unit | 0 | 0 | 0 | 50 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Surti Goat Unit | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Uttarakhand Local Goat Unit | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

1.3 (c) ANTHELMINTIC RESISTANCE IN GOATS OF DIFFERENT AGRO CLIMATE ZONE

Summary :

Gastrointestinal nematode infection is an economically important parasitic disease of goats. Its a blood sucking gastrointestinal helminthic parasite of small ruminants, causes massive production loss to small ruminant industry worldwide with higher rate of infection in goats in humid areas over semi-arid regions, and reaching its crescendo in monsoon. Epidemiological investigation of parasite infection percentage in goat was made with examination of eggs from faecal samples of different states. In the present study, the coccidial infection was highly positive in Uttarakhand and Himanchal Pradesh and the infection was not found in Assam

CHARACTERIZATION OF BETA-TUBULIN ISOTYPE-1 GENE OF HAEMONCHUS CONTORTUS IN GOATS

| S.No. | State | No. of Sample | % Coccidia | % Bursat |
|-------|------------------------------|---------------|-------------|------------|
| 1 | Leh-Ladakh (Jammu & Kashmir) | 45 | 57.78 (26) | --- |
| 2 | Andaman & Nicobar | 67 | 91.11 (41) | 2.99 (2) |
| 3 | Kerala | 114 | 60.00 (27) | 2.63 (3) |
| 4 | Assam | 40 | -- | 12.50 (5) |
| 5 | Maharashtra (Phaltan) | 80 | 37.78 (25) | 30.00 (33) |
| 6 | Uttarkhand | 130 | 131.11 (59) | 6.92 (9) |
| 7 | Maharashtra (Osmanabadi) | 40 | 17.78 (8) | 22.50 (9) |
| 8 | Himachal Pradesh (Gaddi) | 164 | 111.11 (50) | 17.07 (28) |
| 9 | Rajasthan (Bikaner) | 40 | 33.33 (15) | 2.50 (1) |
| 10 | West Bengal | 83 | 44.44 (20) | 2.41 (2) |
| 11 | Jharkhand | 73 | 53.33 (24) | 21.92 (16) |
| 12 | Odisha | 51 | 57.78 (26) | --- |

Haemonchus contortus, is caused by Hamonchosis. *Haemonchus contortus* a blood sucking gastrointestinal helminthic parasite of small ruminants, characterized by gastroenteritis and anaemia, culminating in haemorrhage and haemodilution in infested animals, causes massive production loss to small ruminant industry worldwide with higher rate of infection in goats than in sheep, and in humid areas over semi-arid regions, and reaching its crescendo in monsoon and post-monsoon seasons (Sharma and Singh, 1997; Jithendran, 1998; Jithendran, 2000; Sharma et al., 2000; Prichard and Trait, 2001). Rakesh et. al., (2016) reported the *haemonchus contortus* was found to be the major species of helminths in the study area. The incidence of *H. contortus* infection was 43.75% (14/32) from faecal samples, and 58.33% (21/36) from abomasal scrapings. The difference was statistically non-significant and the genotypic frequencies of rr , rs and ss were 0.25, 0.40 and 0.35 respectively, while the allele frequencies of 'r' and 's' genes were 0.45 and 0.55 respectively. The present study was designed to characterize the β -tubulin isotype 1 gene of benzimidazole resistant *Haemonchus contortus* in different unit of goats from different states and the experiment approaches was undertaken in ICAR-Central Institute for Research on Goats (CIRG), Makhdoom, Mathura. *Haemonchus contortus* infection has been reported to be a major epidemiological feature in this region (Sharma and Singh, 1997). DNA samples were isolated from different unit of AICRP. The genomic DNA of *Haemonchus contortus* parasites were using modified protocol (Rakesh Kaushik et.al. 2016). The parasites were mixed in 1000 μ l of lysis buffer e (Sodium chloride: 100 mM, Tris-HCl: 50 mM, EDTA: 10 mM), 100 μ l sodium dodecyl sulphate (2%), 10 μ l Proteinase k (10 mg/ml), and equal volume (0.65 ml) of chloroform, and incubated at 37 °C for

overnight. After incubation, equal volume of phenol, chloroform, iso-amyl alcohol (25:24:1) mixture was added and centrifuged at 11,000 rpm for 10 minutes. The aqueous phase was collected in a new tube and equal volume (0.65ml) of saturated phenol and chloroform in equal proportion was added. DNA was precipitated with addition of isopropanol (100 µl to 200 µl), and centrifuged at 14,000 rpm for 12 minutes, after washing with 70% alcohol, then store at -20 °C with TE buffer (50 - 100 µl).

PCR-RFLP of β - tubulin isotype 1 gene:

The PCR amplification was carried out by using primer β tubulin isotype. The PCR reaction was setup with 50 µl total volume. The amplification was performed in My cycler (Thermal cycler) Bio-Rad under the following conditions, viz., initial denaturation at 95 °C for 5 minutes, followed by 35 cycles of denaturation at 95 °C for 30 seconds, annealing temperature at 58 °C for 45 seconds, and extension at 72 °C for 45 seconds, followed by a final extension at 72 °C for 7 minutes. The PCR product was digested with *Tal* enzyme at 41 °C for 16 hours, and the product was analyzed in 3% agarose gel. The quality of genomic DNA was checked by agarose gel electrophoresis and the purity of genomic DNA was checked spectrophotometrically. The genomic DNA samples, having 260/280 optical density (OD) ratio, and ranging between 1.8-2.0, were used for further analysis. The amplified product of β -tubulin isotype 1 gene was of 358 bp.

Genotypic and allelic Frequencies

We analyzed about 25 samples of different goat breeds to evaluate genotypic and allelic frequencies at β -tubulin 1 gene in *H. contortus* was presented below in table.

| Black Bengal, Ranchi (Jharkhand) | | | | |
|---------------------------------------|-------------------------------|---------------------------------|------------------|--------|
| Genotypic Frequency | | | Allele Frequency | |
| RS Heterozygous Resistant | RR Homozygous Resistant | SS Homozygous susceptible | S | R |
| 0.57% (4) | - | 0.43 (3) | 0.72 % | 0.28 % |
| Pantnagar (Uttarakhand) | | | | |
| Genotypic Frequency | | | Allele Frequency | |
| RS Heterozygous Resistant | RR Homozygous Resistant | SS Homozygous susceptible | S | R |
| 0.67% (2) | - | 0.33 (1) | 0.84 % | 0.16 % |
| Black Bengal, Kolkata (West Bengal) | | | | |
| Genotypic Frequency | | | Allele Frequency | |
| RS Heterozygous Resistant | RR Homozygous Resistant | SS Homozygous susceptible | S | R |
| - | - | 0.100 (1) | 0.100 % | 0.00 % |
| Gaddi, Palampur (Himachal Pradesh) | | | | |
| Genotypic Frequency | | | Allele Frequency | |
| RS Heterozygous Resistant | RR Homozygous Resistant | SS Homozygous susceptible | S | R |
| 0.44% (4) | - | 0.56% (5) | 0.78 % | 0.22 % |
| Agra, Mathura (Local) (Uttar Pradesh) | | | | |
| Genotypic Frequency | | | Allele Frequency | |
| RS Heterozygous Resistant | RR Homozygous Resistant | SS Homozygous susceptible | S | R |
| 0.40% (2) | 0.20% (1) | 0.40% (2) | 0.60 % | 0.40 % |

2.0 RESEARCH FINDINGS FOR THE YEAR 2016-17

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

Three clusters were established in the A & N Islands and base line information on production, reproduction traits, management practices and disease incidence of Andaman local goats and socio-economic status of goat keepers were recorded. Superior bucks and does were selected and tagged in the project area. Biometric dimensions and body weight of the goats at different age groups (birth, 3, 6, 9 & 12 months) were recorded. The opening balance of the Andaman Local Goat in the cluster was 3158 and the closing balance was 2490, which includes 892 adult male and 1598 adult females. During the year a total of 521 kids were born and 252 died. A total of 1231 were sold during the period. The overall population growth was 79.37%. A new cluster at Baratang Tehsil and Nimbudera Tehsil at North & Middle Andaman district were established and a total of 1280 goats were registered. The overall least squares means of body weights (kg) at birth, 3, 6, 9 and 12 months of age are 1.42 ± 0.54 , 5.86 ± 0.10 , 9.63 ± 0.04 , 13.24 ± 0.19 and 16.10 ± 0.12 respectively. Age at first mating (days), weight at first mating (kg), age at first kidding (days), weight at first kidding (kg), kidding interval (days), service period (days) and gestation period (days) was 257.24 ± 2.45 , 11.52 ± 0.35 , 405.34 ± 5.09 , 16.05 ± 0.46 , 281 ± 14.15 , 98.12 ± 15.28 and 146.89 ± 1.24 respectively. The kidding percentage was 151.01 per cent on the basis of does kidded and the kidding rate was 1.51. The percentage of singles, twins, triplets were 33.78, 62.10 & 4.0 respectively in the present population under study during the period. A total of 13 superior breeding bucks and 02 adult does were distributed in different villages for up gradation of the Andaman local goats in the adopted villages. During the year, no major disease outbreak was reported from the goats. A total of 2560 goats were provided the mineral mixture, 1679 were treated for different illness and 1768 goats were given deworming. During the year a total of seven awareness programme on scientific goat rearing were also conducted in which 148 farmers were imparted training from different villages all the clusters. Three extension leaflets on Andaman Local Goat, scientific goat farming & *dweepon mein bakiri paalan (in hindi)* was prepared for distribution to the farmers. Based on the socio-economic information net income per animal was found to be ₹. 2564/-.

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

The project is being operated in 15 villages under four adopted field clusters i.e a) Batabari, b) Tetelia, c) Nahira and d) Tepesia. Presently, the project encompasses 255 farmer's families rearing 2621 Assam Hill Goats as on 31st March 2017. During the reported period a total of 786 kids were born out of 511 does and recorded an overall population growth of 81.75%. The highest number of births were recorded in the month of January 2017 (20.48%) followed by March 2017 (13.23%). In spite of unusual severe flood in the state in the year 2016-17, a total of 325 goats were sold by the registered farmers with an income of Rs.6,17,550.00 (average ₹. 1907.00/- per goat) which indicates an annual income of ₹. 2744.67 per house hold. The singlet, twinning, triplet and quadruplet percentage has been recorded as 53.08, 40.51, 6.06 and 0.39% respectively, in the four adopted field units. The average body weight of the goats at birth, 3, 6, 9 and 12 months of ages were recorded as 1.27 ± 0.01 , 5.05 ± 0.05 , 7.65 ± 0.09 , 10.62 ± 0.11 & 13.61 ± 0.11 kg respectively. It has been observed that there was an increase of 4.95% in the 12 months body weight over the last year. The average age at first mating, weight at first mating, age at first kidding, weight at first kidding, first kidding interval, service period and gestation period were recorded to be 257.76 ± 7.01 days,

10.01±0.09 kg, 404±5.08 days, 13.98±0.98 kg, 227.16± 6.03 days, 79.93±7.86 days and 147.55±0.99 days respectively. The average mortality rate was 6.79%. A new village has been adopted under the cluster Tepesia, in Kamrup district with 18 beneficiaries. Another 12 new beneficiaries have been registered under the project for the period under report in the remaining three existing clusters. During the year, a total of 10 new selected bucks have been distributed and 23 numbers of existing bucks were exchanged among the clusters to avoid inbreeding. A total of 33 numbers of bucks are being used for selective breeding in the four field units. Awareness cum training programme (12) were organized to enhance knowledge of goat farmers on the scientific rearing of goats. Twenty five vaccination camps to immunize 6241 animals, 22 deworming camps for 5786 animals and 32 treatment camps to treat 1824 animals including goats of non-adopted villages were organized.

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

Barbari breed of goat has attained special significance now days as meat breed due to higher weight gain, prolificacy and suitability for Intensive rearing. Nucleus flock of these goats was maintained under semi-intensive feeding system from 1983 and from 1993 under AICRP on Goat Improvement. The closing and opening balance of flock was 825 and 716. Three hundred seventy nine kids were born out of 251 does. The population growth of goats was 145% during 2016-17. Three hundred eight goats were provided to farmers and development agencies. The mortality of the flock was 2.9%. Least squares means for weight at first mating, age at first mating, weight at first kidding and age at first kidding, first kidding interval & gestation period were 19±4kg, 368±16 days, 21.7±7.2, kg 509±10 days, 217±11 days and 145±0.33 days, respectively. There were gradual reduction in AFS and AFK over the years however, WFS and WFK shown increasing trend over the years indicating positive improvement in body weight of yearlings. Breeding efficiency on the basis of doe's available and doe's tugged were 72 and 78%, respectively and kidding% on the basis of does available and doe's tugged were 109 and 140%, respectively. Kids born as multiple births for this year were 65.4% of total kids born. The kidding rate (litter size) was 1.51. The least squares means of body weight of kids at birth, 3, 6, 9, and 12 month of ages were 1.91±0.01, 7.71±0.08, 12.34±0.15, 16.47±0.22 and 21.94±0.34 kg, respectively. The estimates of h^2 for body weight of kids at birth, 3, 6, 9, and 12 month of ages were 0.106±0.045, 0.230±0.073, 0.210±0.070, 0.267±0.077 and 0.171±0.066 in this flock. The heritability estimated by animal model also found with similar low to moderate estimates (0.12 for birth weight to 0.19 for 12 month body weight). The highest feed conversion efficiency was obtained during birth to 3 months and thereafter relative decline in ADG during 3-6 followed by 6-9 months growth ages. Overall mean for 90 days milk yield, 140 days milk, total lactation yield, average daily milk yield and lactation length were 52.71±1.00, 67.65±1.44, 63.02 ±1.30 liters, and 130±1.52 days, respectively. The estimates of h^2 for MY 90, LMY and LL were 0.142±0.131, 0.109±0.108, 0.106± 0.109 and 0.309±0.115 respectively. The selection differential for 9 months body weight was 6.08 kg and that of the dam's 90 days milk yield was 20.3 liters. There are 32 multiplier flocks of Barbari goats were created for genetic improvement, conservation and promoting scientific goat farming among educated youths and farmers. These flocks were supported by pure-bred Barbari goat unit with 12-16 animals besides technical support from time to time. The net profit per goat was ranged from ₹. 4300 to 9600/year with an average of ₹. 5225. The major contribution of the project has been in sustainable genetic improvement and conservation of the breed at farm and in home tract.

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

Four clusters of AICRP have been established in different zones of Jharkhand having 3165 goats. Baseline data on Black Bengal goats and farmers have been completed. 40 farmers at different centers have been added having 282 goats. Data on growth and reproduction parameters have been recorded and data were analyzed. A total of 7 bucks & 28 Does (on the basis of growth and multiple births) were selected from different centers and distributed among 7 farmers under TSP program. Bucks used for three years at a center have been exchanged from one center to others to avoid inbreeding. Selection differential of males at 12 months of age were estimated to be 2.09 kg. The overall means of body weights at birth, 3, 6, 9 and 12th month of age were found to be 1.30 ± 0.12 , 6.19 ± 0.05 , 8.71 ± 0.18 , 11.65 ± 0.14 , 13.70 ± 0.49 kg respectively. 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 269.90 ± 0.05 days, 11.60 ± 0.19 kg, 418.89 ± 0.69 days, 12.00 ± 1.01 kg, 68.00 ± 0.62 days, 215.89 ± 0.76 days and 147.89 ± 0.12 days, respectively. Kidding rate (litter size) of Black Bengal goat was estimated as 1.69 with 170% kidding. *Pro-poor goat based technology developed* by the Ranchi Veterinary College, BAU were being used by the farmers extensively such as dipping and castration of kids at the age of 2 months. All the goats in coverage areas were vaccinated with PPR (2780 goats), dipping (3519 goats) and deworming of 3607 goats have been done. Due to timely intervention mortality has come down to 2.78%. Training on 'Scientific Goat Rearing' was organized in which 27 farmers from different centers participated. Two exposure visits and forty 10 days training were organized.

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

AICRP on Goat Improvement - Black Bengal Field Unit is now working in four clusters i.e. Ayeshpur and Ganguria (Nadia cluster); Jatirampur and Rangabelia (Sundarban cluster); Bamunia and Beliapukur (Murshidabad cluster); Lodhasuli (Jhargram cluster). There are 913 registered does from 534 farmers (SC-292, General-151, ST-68 and OBC-23), from the 913 registered doe (142, 150, 172, 66, 51, 150 and 182 does in Ayeshpur, Ganguria, Jatirampur, Rangabelia, Bamunia, Beliapukur and Lodhasuli units respectively). A total of 1488 kids were born from 832 kidding during the period. **Twenty three** bucks were selected based on their 6 months body weight and prolificacy status of their dams and purchased. With the opening flock of 2308 in 2016-17, after selective breeding with superior males the closing flock has been reached to 2538. The population growth rate of Black Bengal for 2016-17 was 253.85%. The average flock strength has been increased to 5.80 ± 0.22 in 2016-17 which was 5.65 ± 0.21 during 2015-16. Majority of farmers have the flock size of 1 to 4 goats (42.81 %) followed by 5 to 8 (39.54 %), 9 to 12 (14.71 %) and then by above 12 (2.94 %). The average body weight at birth, 3 month, 6 month, 9 month and 12 month were 1.24 ± 0.01 kg, 5.11 ± 0.12 kg, 7.78 ± 0.03 kg, 10.38 ± 0.05 kg and 13.05 ± 0.06 kg respectively during 2016-17. The mean body length, height at wither and heart girth were 20.29 ± 0.04 cm, 21.65 ± 0.06 cm and 23.60 ± 0.10 cm at birth; 32.64 ± 0.07 cm, 34.13 ± 0.07 cm and 38.25 ± 0.15 cm at 3 months; 37.57 ± 0.25 cm, 39.24 ± 0.08 cm and 44.54 ± 0.22 cm at 6 months; 41.52 ± 0.09 cm, 43.24 ± 0.25 cm and 49.38 ± 0.11 cm at 9 months; 45.30 ± 0.13 cm, 47.07 ± 0.14 cm and 54.43 ± 0.18 cm at 12 months of age. Black Bengal doe produces 3.35 ± 0.03 lit, 6.42 ± 0.06 lit, 8.40 ± 0.09 lit and 9.24 ± 0.12 lit of milk in 15 days, 30 days, 45 days & 60 days respectively. The milk yield beyond first lactation was increased up to seventh parity,

and then decreases. Higher milk production performance has been observed during monsoon and winter kidding than summer. Significantly higher milk yield has been recorded in Murshidabad cluster, followed by Jhargram, Sundarban and Nadia cluster. The average age at first mating/service and 1st kidding were recorded as 234.55±0.44 days and 381.37±0.25 days respectively. The average service period, gestation period and kidding interval was 62.48±1.62 days, 147.02±0.10 days and 209.52±1.62 days respectively. The kidding rate (litter size) was as 1.79. Twin born kidding is maximum (52.76 %), followed by singlet kidding (34.86 %), triplet kidding (11.66 %) and quadruplet kidding (1.32 %) has been observed in 2016-17. The overall mortality in the total flock has been restricted to 6.77 % in 2016-17. The average annual income from goat rearing per farmer also has been increased from previous year i.e. ₹.7150.00±239.29 in 2016-17 which was ₹. 6073.44±240.82 in 2015-16. In landless, marginal (upto 20 katha land), small (20 - 40 katha land) and medium (above 40 katha land) farmers, the annual income was ₹. 6850.00±1524.83, ₹. 8270.33±351.79, ₹. 5527.37±449.48 and ₹. 7063.68 ± 489.53 respectively. The income per doe is ₹. 2860.81 which is also increased than that of previous year (₹. 2748.00 in 2015-16). The AICRP on Goat Improvement was successful enough to create awareness among the goat farmers about identification and record keeping, disadvantages of early breeding of young does; regular vaccination and deworming; importance of giving supplementary feeding to does, bucks and kids; optimum age and weight of kids for sale with expected market rate; first aid treatment etc. through organization of several treatment cum vaccination camps along with other extension activities like meeting, interactive sessions, seasonal advisory, training, exposure visit etc.

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

The AICRP unit on Changthangi Goats was operational at HMAARI, SKUAST-K, Leh. There are 3 clusters of Zone-I, i.e Kharnak, Samad and Korzok, with a total of 2750 breedable does and 72 breeding bucks. However, in 2015, the total goat population in all the three clusters was to 10032 with a total of 3246 breedable does and 89 breeding bucks. The closing balance in these three clusters was 10285 with a total of 3165 breedable does and 97 breeding bucks during 2016. The overall population growth for this year was 56.19 % as compared to last year 62.96 %. A total of 938 goats were sold to other adjacent breeders, farms and other institutions this year by the adopted breeder of the unit for breed improvement. Five improved bucks were distributed to beneficiaries in the adopted clusters. Tagging of approximately 11000 goats was completed using unique All-flex Tags with farmers and cluster name imprinted on the tags. The overall body weight growth at birth, 3 month, 6 month, 9 month & 12 month was 2.46±0.23 Kg, 6.32±0.27 Kg, 9.45±0.19 kg, 12.98±0.18 Kg and 16.08±0.21 respectively. The overall average Pashmina production for all the three clusters was 275 ±12.54 g. This year, the number of does available for breeding was 3246 out of which 2526 does kidded. The overall kidding percentage among the registered goats in all the 3 clusters was 77.81 % compared to last year 66%. This year, the abortion rate has slightly increased to 13.30 % from 9.22 during last year, which is attributed to heavy snowfall and starvation. The overall mortality rate irrespective of age groups was 8.76 % with a kid mortality of 22.77 %. The main reason for the mortality was inclined weather and scaracity of feed and fodder. More than 3746 goats were treated for various ailments during the period and all the goats of the adopted farmers 9267 goats were dewormed. Inventories such as portable weighing balance (10 Nos.) and Burdizzo castrator

(4 Nos) were distributed among the beneficiaries. A total of Seven, 2 days and 1 three days training were conducted for the breeders in the Changthang area. The unit developed a 10-hectare land for fodder production with alfa-alfa, mustard, maize, local pea and Kiker plantation along the border as windbreak. Successful silage and compost making was done this year using locally available ingredients and has been sent for analysis. Hon'ble Governor of J&K released two leaflets one on Pashmina goat health management and another on CCPM management to educate the breeders/farmers during his visit to this unit in sept 2016. Further, he has given best pashmina grower award to one of AICRP beneficiaries.

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

The All India Co-ordinated Research Project on Goat Improvement (Gaddi Field Unit) was operational at HPKV, Palampur, Himachal Pradesh. During the present report period, the performance of already established four field units belonging to different migratory routes were monitored. The opening balance as on 01.04.2016 was 1123 goats including 723 breedable does. During the year, a total of 592 young kids were added in selected flocks by way of birth, 122 animals of different age groups died and 441 animals pertaining to different age groups were sold by the owners. The closing balance as on 31.03.2017 was 1152 animals under different age groups. The least squares means during the year under report for body weights at birth, 3 months, 6 months, 9 months and 12 months of age were 3.05 ± 0.03 , 15.09 ± 0.12 , 19.55 ± 0.17 , 24.53 ± 0.17 and 27.60 ± 0.21 Kg., respectively wherein significant effects of sex of kid and years were observed. The overall body length, body height and body girth at birth were 32.01, 33.31 and 35.78 cm, respectively. The corresponding figures at six months of age were 62.83, 62.11 and 65.21 cm and at twelve months 66.24, 63.07 and 74.52 cm, respectively. For breeding inputs, a total of 47 male kids of 4-6 months age group were purchased after primary selection on the basis of morphological characteristics and better/ 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, 40 male kids were also purchased during March, 2017 for the distribution as breeding buck to the farmers during financial year 2017-18 and are being reared at Palampur center. All selected animals were provided health coverage under migratory field conditions viz. vaccination against PPR (1500 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 (300 Kg) and concentrate feed (25 qtls.) supply. Collaboration with state Animal Husbandry Department was ensured while providing health coverage and other related activities. The overall population growth was observed to be 109.45%. The overall mortality incidence was found to be 7.11%. The incidence of twin birth was recorded 21.56%. The overall abortion incidence in the flocks was observed to be 10.06%. The kidding rate of the flocks was observed to be 1.21%. Maximum kidding was recorded in the month of October (125 kids) and November (166 kids).

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

The All India Coordinated Research Project on Ganjam goats is operational in distribution in four clusters of Ganjam district, the native tract of Ganjam breed of goat, namely Chhatrapur, Rambha

and Khallikote with a total of 62 registered farmers and a new cluster i.e. Bhanjanagar has been added this year where a total of 19 farmers have been registered taking the total number of the farmers to 81. Twenty females from each of the three centers at Chhatrapur, Rambha and Khallikote have been identified and milk recording carried out in 260, 140 & 180 observations taken on the milking does. Tagging of the animals is being carried out regularly. The Area specific mineral mixture developed by them under AICRP- Improvement of Feed Sources & Nutrient Utilization for raising animal production, Bhubaneswar to replenish the critical mineral in Ganjam goats. Preventive health care and vaccination are routinely being carried out with vaccination of 3000 dosages of PPR, 3000 dosages of goat pox, 1200 dosages of Enterotoxaemia vaccines and 670 dosages of FMD. Baseline data, growth data and milk recordings were collected and were uploaded to the GMIS server. Prepared a draft copy of the by-law for the Ganjam Goat Keepers Society. Three training programmes each with fifty goat farmers were conducted at Jirabadi, Khallikote and Chhatrapur on 15th March, 24th March and 30th March 2017 where farmers were made aware about scientific management practices of goats.

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

Himalayan goat unit under All India Coordinated Research Project (AICRP) on **Goat Improvement** was started in the year 2014 with the aim of improvement of local Himalayan goats (Chaugarkha) at Kumaon hills of Uttarakhand. These goats are mainly reared by small and marginal farmers for meat purpose. Villages namely, Khola and Gandhak of Dhauladevi block in have been adopted as cluster-1 and Lamkot-Fatqual dungra of Almora district as cluster-2 after surveying its breeding tract and distribution. Chamdungra-Timta and Duni of Gangolighat block of Pithoragarh district has been identified as third cluster. Total ninety two farmers have been registered and 355 adult breedable does were tagged as well as 63 kids were also tagged from cluster 1 & 2. The morphometric characters from these goats were also recorded. The average body weight, body length, body height and chest girth of male were 22.00±3.93 kg, 52.68±3.93 cm, 59.07±5.02 cm and 61.49±4.38 cm, respectively. The average body weight, body length, body height and chest girth of female were 18.08±3.57 kg, 50.26±3.70 cm, 53.81±3.44 cm and 58.00±3.78 cm, respectively. The mean body weight of Chaugarkha goat at birth, 3 month, 6 month and 9 month & 12 month were 1.55±0.26, 6.31±1.12, 10.42±1.66, 15.43±2.95 and 20.44±4.23 kg, respectively. Socio-economic data were collected and major problems for goat husbandry in the region were identified as lack of knowledge on scientific goat farming, scarcity of feed and fodder, parasitic infestation, distress selling. Regular health checkup, sample collection, diagnosis of various diseases at field and at laboratory level were done. Accordingly, prophylactic and curative measures were taken time to time. Five animal health cum awareness camps were organized in field level. Twenty bucks (3 to 6 months) were purchased. At institute farm, five breedable bucks and twenty seven does have been selected initially for breeding purpose on the basis of adult body weight and breed characteristics.

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

Jamunapari goat is known for its milk production and selective breeding programme is carried out at CIRG to improve the production performance. The flock strength of nucleus herd of Jamunapari goats at CIRG for the year 2016-2017 was 719. During the period 264 kids were born, in which 128

were males and 136 were females. The population growth of the flocks was 81.5% during the year. The nucleus herd is maintaining about 311 breedable adult does. The overall mortality of the flock during the year 2016-17 was 5.69 % and annual culling rate was 5.79 %. The mean body weights of kids at birth, 3, 6, 9 and 12 months of age were 3.17kg, 10.05kg, 17.81kg, 22.46kg and 27.16kg, respectively during the year. Year and Parity of dam had significant effect ($P<0.01$) on kid's body weight up to 12 months of age and sex had highly significant effect ($P<0.01$) on all age group. Season of birth had highly significant effect ($P<0.01$) on 3 month of age. Males had higher body weight than females at all the ages and the birth type also showed highly significant effect ($P<0.01$) at all the ages. Year by parity interaction had significant effect ($P<0.01$) on body weight at the age of 3 Month. Season by sex interaction and Season by birth type interaction had significant ($P<0.01$) effect on body weight at the age of 6 month, 9 month and 12 month. Year by sex interaction had significant ($P<0.01$) effect on body weight at 6 month of age. The male had significant higher body weight than female. The Average daily weight gain (ADG) of the kids under intensive management was 107.88, 120.78, 107.86, 133.69 and 107.85 g/day, respectively during 3-6, 3-9, 3-12, 6-9, and 6-12 month age group. The highest value of ADG was 171g/d during 6-9 months of age. Least squares means of part lactation milk yield in 90 days and 140 days were 71.361 ± 1.586 and 111.583 ± 2.771 liters, respectively during the year 2016-17. 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 90 days milk yield. The doe, which had multiple births, produced more milk in comparison to doe having single kid. During this year, a total of 196 does kidded 264 kids, out of which single, twin and triplet born kids were 130, 64 and 02 respectively. Genetic parameter estimates were obtained from 6590 records generated between 1982 to 2013 from 5922 animals in the pedigree over 13 generations. The most parsimonious model for early growth traits included permanent environmental effects due to the dam (pe) and litter effects. Similarly, the most appropriate model for early average daily gain (ADG) between birth and 3 or 6 months also included permanent environment (pe) and litter effects. The estimates of heritability for birth to 12 months ranged from 0.10 to 0.43. The estimates of heritability for ADG varied from 0.04 to 0.41. In general, we had higher estimates of heritability observed when sire was fitted as a random effect. There was no genetic variation observed for survival between birth and 3 months of age. However, we observed heritability estimates of between 0.18 and 0.39 for post-weaning period to 12 months of age. The genetic trend at 9 months of age and 12 months of age was 0.144kg & 0.189 kg per year. The genetic trend at all the ages was positive during the study period. The data comprised of 2217 phenotypic records for milk yield at 90 days (MY90) and 140 days (MY140), total milk yield (TMY) and lactation length (LL) obtained from the progeny of 173 sires and 446 dams during the period 1990-2013. The most appropriate genetic models for milk yield traits were those that included permanent environment effects due to the animal. The direct additive heritability estimates were 0.15 ± 0.05 , 0.26 ± 0.07 , 0.25 ± 0.08 for MY90, MY140 and TMY, respectively. The additive heritability estimate for LL was low and non-significant at 0.02 ± 0.03 . The repeatability estimates were moderate to high ranging from 0.68 to 0.73 for milk yield traits. The repeatability for lactation length was 0.20 ± 0.03 . Maternal variances were low ranging from 0.03 for MY90 to 0.13 for TMY. There was an increase in mean milk yield of 0.25, 0.70 and 0.72 kg/year respectively at 90 and 140 days, and for TMY. Genetic trends and phenotypic trends for MY90, MY140 and TMY were positive and indicated significant improvement in milk yield traits due to selective breeding. Reproductive performance of

Jamunapari goats in terms of breeding efficiency and kidding percent on the basis of does selected for breeding were 95.88% and 106.88%, respectively. The kidding rate was 1.35. Improved animals were supplied to various developmental agencies, farmers and state governments, Non-Government Organizations and progressive breeders for genetic improvement in the field conditions. During year, 154 improved animals were distributed to goat breeders for breed improvement programme. Jamunapari unit works with Green Global Farm (Intensive system goat rearing) and with Govt. breeding farm, Shikohabaad, UP. Similarly we are working to analyse the impact of superior males in collaboration with NGO (Hitaishi Sansthan) in the Bharatpur region of Rajasthan. In this direction we have supplied 45 bucks in collaboration with Govt. of Rajasthan and analyzed the impact of distribution in the region.

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

Project operates in six field centres viz. Thalassery, Badagara, Tanur, Perambra, Thalaiparamba and Kottakkal located in the North Kerala. Baseline information on production, reproduction and management practices were collected. Total of 1557 animals from 214 farmers were registered and all adult females (1086) were provided with insurance coverage under the project. The participation of women was 64.95%. The overall population growth recorded was 67.47% and the average adult flock size was 5.07 goats. Majority of goat keepers (93.30%) in the project area had school education with land holding of below 25 cents. During this year, 26 bucks were distributed to farmers. Periodical deworming and vaccination coverage was provided to 1557 goats. Supplied 2000kg of mineral mixture and 1680kg of vitamin feed supplements to farmers. The kidding rate in Malabari goat population was 1.65. The percentage of singles, twins, triplets and quadruplets were 43.30, 45.60, 10.60 and 0.50, respectively. Mean average daily milk yield recorded was 0.89 ± 0.05 litres. Body weight at birth, three, six, nine and twelve months of age was 2.10 ± 0.08 , 8.45 ± 0.20 , 15.16 ± 0.30 , 20.10 ± 0.55 and 22.05 ± 0.90 kg, respectively. The mean age at first kidding and inter kidding interval were 394.10 ± 12.30 and 274.40 ± 15.20 days, respectively. The production economics was calculated under field conditions and the main source of income was from sale of kids. Enteritis was the major cause of morbidity (37%) followed by pneumonia. The mortality rate was 4.57% in adopted flocks. As capacity building, trainings on goat rearing were organized to 705 farmers and entrepreneurs. Trainees are linked through ICT - WhatsApp for further follow up and guidance. A monograph on Malabari goat, one training manual, 6 brochures, 2 technical papers, 8 research papers and 12 research abstracts were published. As part of value addition, technology for goat milk products and pseudomonas enriched goat manure were standardized.

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

The aim of the field unit is to improve the productivity of Marwari goats in the farmers' flock through selection within the breeding tract of this breed. At present this field based unit is functioning in the five clusters in Rajasthan at Deshnok, Daiya, Kalayansar, Raisar and Kan Singh Ki Sird villages. In addition to this, the Buck Rearing Center is also functioning at Livestock Research Center, Kodemdesar (RAJUVAS, Bikaner) for rearing of elite breeding bucks for distribution to the farmers. The goat breeders were provided preventive and curative health coverage. The population growth was 124.39% for all the clusters of this unit during this financial year. The overall body weights (2012-16) at different stages of growth were 2.65 ± 0.003 kg at birth, 8.95 ± 0.010 at 3 month,

13.73±0.017 kg at 6 month, 18.07±0.022 kg at 9 month, 25.28±0.030 at 12 month of age. The biometrical parameters like body length, body height and heart girth were measured from birth to 12 months of age at three month interval. The lactation performance in term of the average milk yield was 32.24±0.19 liters in 30 days, 55.44±0.36 liters in 60 days, 75.17±0.39 liters in 90 days, 127.64±1.391 liters in 140 days during 2012-2015. The average lactation length in Marwari goat was observed as 81.89±0.41 liters 140 days. The effect of year and season of birth, type of birth and lactation order on locational performance was also evaluated. The kidding percentage and kidding rate was 129.09 and 1.33, respectively during the reporting period. The average age at first mating was 385.41±10.74 days with body weight of 23.63±0.22 kg. The average age at first kidding ranged from 485.58±6.74 to 536.90±10.73 days, weight at first kidding 27.01±0.26 7 to 30.86±0.23 kg, the first kidding interval from 208.29±1.15 to 336.38±7.57 days and service period from 138.71±8.71 to 186.38±7.57 days during 2012 to 2016. Incidence of abortions and stillbirths were 10.33% and twinning percent was 16.74 %. The overall mortality was 3.53 % for the reporting period (2016-17). Out of the total mortality, 24.06% from pneumonia, 18.72% from pnemo-Enteritis, 18.72% Toxaemia/ Acidosis, 10.70% from Colibacillosis, 8.02% from NAD/general weakness, 8.02 % from predation, 6.42% from Coccidiosis and 5.35% from shock were the causes of death. The total numbers of case covered under health coverage were 25,823 which included both prophylactic (59.03 %) and curative (40.96%). Out of total 15,224 prophylactic measures, 5,250 were for endo-parasite, 2752 for ecto-parasite, 3062 for FMD vaccination, 1225 for ET vaccination and 1052 for PPR vaccination for this financial year. The respiratory and digestive system diseases accounted the highest morbidity (22.78%, 20.35%) followed by the nutritional deficiencies (8.55 %), skin diseases (4.06 %), surgical intervention (2.05 %), miscellaneous diseases (1.48 %) and reproductive system diseases (1.45 %). Ten bucks and 16 females' elite animals were sold in addition to 17 bucks distributed to our own cluster. Fifty out of 66 goat keepers were provided daily required items such as water bottle. This improvement is due to distribution of selected elite sires in farmers' flocks and effective health coverage.

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

An Osmanabadi goat field unit was established at NARI in April 2009 under the AICRP on Goat Improvement. During the period 1 April 2016 to 31 March 2017, the production performance of goats in farmers' flocks was assessed in three districts in western Maharashtra State. viz. Solapur, Ahmednagar and Sangli districts. The Osmanabadi unit MS Access database of goat records is now also on a web-based platform called AniCloud for ease of data retrieval. This has been done in collaboration with a New Zealand based firm called AbacusBio. Seven hundred sixty eight adult does (325, 224 and 219 adult does in Solapur, Ahmednagar and Sangli districts respectively) are being recorded. These belong to 192 goat keepers, indicating that about four goats are reared per household on average. Detailed periodic recording has been done of their body weight, milk yield, reproduction, kid weights, mortality, morbidity, cost incurred for goat rearing and income earned. 1094 kids were born in 644 kiddings during April 2016 to March 2017, making the average litter size 1.70. Mortality across all age groups and sexes was 4.5%. This has reduced from 6 to 7.5% in the last few years. During the period April 2016 to March 2017, with six months weights of 16 to 19 kg and dam's milk yield 1 to 1.8 litres per day. The total number of bucks purchased since 2009 is 53. About 34,000 straws (0.25 ml French mini straws) of frozen semen of 46 Osmanabadi bucks have been

produced so far in NARI's Frozen Semen Laboratory from January 2012 to 31 March 2017. During 2016-17, total 2,348 Osmanabadi buck straws were supplied to A.I. technicians, farmers and entrepreneurs for breeding Osmanabadi goats including 225 straws supplied to The Goat Trust, Lucknow, Uttar Pradesh and 69 straws supplied to Quidditas Farms Pvt. Ltd., Gulbarga, Karnataka. More than 50 A.I. technicians have started using Osmanabadi buck frozen semen from NARI for inseminating Osmanabadi and local does in the field. Conception rates of 50 to 55% have been reported by field technicians. Additionally, 20,482 straws of Osmanabadi buck semen were procured from NARI in September 2016 by the Karnataka Animal Husbandry Dept. for use in different areas of Karnataka State. The Osmanabadi unit provided training in goat cervical A.I. using frozen semen, to about 100 officers of the Animal Husbandry Department in Karnataka. Nine information booklets in Marathi language have been distributed to participating and other goat keepers to promote better goat management practices. Regular preventive health care of all 768 goats and their kids was carried out in all villages including vaccinations, deworming and spraying against ecto-parasites. 71 goat keepers were trained in 6 programs 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. Six Goshthi/meetings and two exposure visits of women were conducted. The quality of the Osmanabadi breed in the project and other areas including other states is being improved continuously through dissemination of the genetics of elite bucks.

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

The Sangamneri field unit is working in two dimensions being it a threatened breed i.e. upgradation alike Sangamneri goat and genetic improvement in existing Sangamneri population. During the year 2016-17, 2023 does were registered in 29 villages under 4 clusters and 3 districts. Total 43 bucks were rotated in 4 clusters for breeding. The total progeny generated was 1851. The overall least squares means for birth, 3, 6, 9 and 12 month of age were 2.12 ± 0.04 , 9.42 ± 0.11 , 15.05 ± 0.11 , 19.23 ± 0.13 and 22.84 ± 0.70 kg, respectively. The corresponding least squares means noticed during the period were 2.16 ± 0.04 , 10.30 ± 0.12 , 16.10 ± 0.10 , 19.66 ± 0.16 and 23.17 ± 0.24 kg, respectively. The 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 age at first kidding was 418.70 ± 19.62 days and kidding interval was 257.91 ± 4.88 days while the no. of kids per kidding were 1.96 ± 0.08 . The overall 90 days milk yield was 95.21 ± 2.28 L which was significantly affected by Village cluster, year and season of kidding and kidding interval. The seasonal advisory has been provided to goat keepers through Gramin Krishi Mosum Seva (GKMS) of Mahatma Phule Krusi vidyapeeth, Rahuri. During the period 7 farmers trainings, 3 health camps, 4 exposure visits and 13 group meetings were organised. One training manual for goat keeper is published. The process standardisation for Quarg Cheese by using goat milk has been carried out with the help of PG student of Dairy science. The major impact of this unit is increase the population of Sangamneri goat with improvement in growth and prolificacy.

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

The opening balance of flock strength on 01.04.2016 was 663 animals. The closing balance as on 31.03.2017 was 595 animals. The overall least squares means for live weights of kids born during 2012-13 to 2016-17 at birth, 3, 6, 9 and 12 months of age were 3.090.09, 12.270.42, 19.930.65,

26.56±0.81 and 31.32±0.84 kg, respectively. Males were heavier than the females at all stages of growth. The effect of year, sex and type of birth was significant on almost all the traits, except type of birth on PDG3-12 month. The LS means of growth rate in terms of per day average gain was 101.76±4.50 and 68.15±2.66 g from 0 to 3 months (PDG 0-3) and 3 to 12 months (PDG 3-12) of age, respectively. The overall least squares means for milk yield of does kidded during 2011-12 to 2015-16 at 90 days, 150 days, total lactation milk yield and lactation length were 66.06, 106.48, 93.13, 106.85 and 192.78 days, respectively. The effects of year of kidding and lactation order were significant on almost all the traits except lactation order on 90DMY and 150DMY. Out of 306 does available for breeding, 288 were tugged and 242 kidded with 32 giving birth to twins during the year. The tugging percentage was 94.12. The breeding efficiency was 88.30% and 94.32%, on the basis of does available and does tugged. The kidding percentage was 97.16 and 103.79% on the basis of does available and does tugged, respectively. The litter size was 1.13. The mortality rates in 0-3, 3-6, 6-12 month age group and in adults were 9.46, 1.43, 0.42 and 0.33 percent, respectively. The overall mortality rate based on animals available and exposed at different stages of growth was 2.81 percent. A total of 201 animals comprising of 88 males and 113 females were sold to the progressive farmers, Government and non-government agencies for improvement of their livestock. In addition to these, two superior Sirohi bucks were distributed free of cost to registered goat farmers under MoU for breeding and improvement of their livestock. Four KVKs located at Bundi, Chomu, Sangaria (Hanumangarh) and Khedbrahma (Gujarat) were provided with breeding males and females for establishment of Sirohi goat units.

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

Baseline information on production and reproduction traits, managerial practices, production trend and disease pattern were recorded and analyzed. The registration of farmer's flock and the identification of animals were carried out in four clusters. The data on growth, lactation and reproductive performance of Sirohi goats under field conditions have been analyzed. The closing balance of the registered flock was 1997 animals including 1189 adult females. During report period, 869 kids were born out of which 442 were males. During report period population growth was 72.62%. Total 310 males were sold out of which maximum 157 males were sold at adult age group. The least square means for body weight at birth, 3, 6, 9 and 12 months of ages were 2.43±0.03, 13.14±0.28, 17.63±0.36, 20.99±0.65 and 25.98±0.67 kg, respectively. The birth weight increased over the years. Year, sex of kid and type of birth had significantly affected the body weights. Single born kids were significantly heavier than the multiple born kids at all the ages. The overall least squares means for milk yield over 30 days, 60 days, 90 days, 150 days, lactation yield and lactation length were 21.74±1.36, 47.54±2.71, 69.13±3.52, 100.01±4.05, 100.31±4.02 lit. and 151.11±0.11 days, respectively. 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 square 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 474.03±12.56 days, 27.12±0.16 kg, 624.58±12.55 days, 30.23±0.14 kg, 247.97±4.23, 398.05±4.24 and 150.10±0.03 days, respectively. The kidding rate (litter size) was 1.17. During report period 4980 animals were dewormed, ectoparasiticide was used in 4228 animals. Further, 1542 and 700 animals were vaccinated for ET & PPR, respectively. The overall mortality was 3.61%.

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

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 18 villages under six clusters. The data on growth, lactation and reproductive performance of Surti goats under field conditions have been analyzed using least square techniques for the year 2016-17. The closing balance of the registered flock was 966 animals including 732 females. Out of 732 females 640 females were white coloured that includes 512 adult white coloured females. During the year, 34 new white coloured goats had kidded for the first time in different clusters. During current year, 564 kids were born out of which 289 were males. White coloured kids born during the year were 172 males and 166 females respectively. Major constraint faced during the year again remained non availability good quality white coloured Surti bucks. Farmers raise white Surti type buck for sacrificial purpose on Id-ul-Fitar festival. This imparts high selection coefficient against this breed leading to genetic death of almost entire elite Surti germplasm from male side in natural breeding tract of this breed. Closing balance for born and brought up male Surti bucks in field clusters remained only 9 due to sale of white coloured Surti bucks during Id-ul-Fitar festival as preferred by Muslims of South Gujarat region. Total 166 males were sold out of which maximum 135 males were sold between 6-12 months age. Overall population growth of 98.46% was recorded with the addition of 564 live kids. A marginal increase in the population growth had been observed during current year. *Continuously increasing white: non-white ratios of kids have been obtained in farmers flock as a result of selective breeding for economically important trait of white colour. The white: non-white kid ratio had significantly increased from 1.02 to 1.49 in last five years.* The least square means for body weight (2011-2016) at birth, 3, 6, 9 and 12 months of ages was 2.035 ± 0.01 (2671), 8.199 ± 0.04 (1740), 13.138 ± 0.08 (1351), 18.288 ± 0.09 (1111), 21.435 ± 0.16 (500) kg, respectively. *Significantly higher body weight had been observed among all the age groups during report period as compared to year 2012-13.* Season of birth, sex of kid, colour and type of birth had also significantly affected the body weights. Kids born between November and February months had higher birth weights at all age groups. The least square mean weight of single born kids was found to be significantly higher than the twins and triplet kids at all the age groups. The overall least square means for milk yield over 90 days, 150 days, lactational yield and lactation length was 76.63 ± 1.15 (765), 116.92 ± 1.63 (594), 122.85 ± 2.00 (765) Kg and 168.53 ± 1.62 (765) days, respectively. *Significant increase in 90 and 150 day milk yield had been observed during report period as compared to 2012-13.* Season of kidding has significant effect on milk yield and goat kidded during the July to October remained low producer throughout. Surti goats with higher litter size were found to be better producer compared to their counter parts. This phenotypic variation in milk yield among Surti goats gives possible scope for improvement in Surti Flock for total lactation yield using selection tools. Age at first mating, weight at first mating, age at first kidding, weight at first kidding, service period, kidding interval and gestation period was 463.62 ± 30.11 (34) days 22.38 ± 0.45 (34) Kg, 608.53 ± 30.11 (34) days, 24.47 ± 0.46 (34) Kg, 171.71 ± 3.86 (346), 321.00 ± 3.82 (346), 149.29 ± 0.30 (346) days, respectively. The kidding rate (litter size) was 1.50 justifying higher prolificacy in Surti Goats. *Continuous significant improvement in reproductive traits had been observed over last five years in study area. Total 46 breeding bucks were provided to goat farmers of adopted villages and those have taken training from our center to minimize the*

problem of non-availability of Surti bucks. During last five years 111 breeding bucks had been provided from the center. During 2016-17 thirteen (13) breeding females had also been supplied. Additionally surplus stock of 29 males and 43 females had also been distributed to farmers and Jeevdaya trust. In total 140 males and 77 females had been supplied by Surti field unit during last five years. During current year 2275 animals were dewormed, Mineral mixture and antibiotics were distributed for use in 1650 animals. Around 175 doses of FMD, PPR and HS vaccine had been given to the goats maintained at Surti farm unit. Overall mortality in Surti flocks was 5.94%. Visits to the tribal villages of Surat and Tapi district have been undertaken during the current year. Sensitization about benefits of AICRP on Goat scheme was made through field visits and on farm one day training programs. Eighteen (18) key persons have been identified from 14 villages that voluntarily came forward for the implementation of scheme in their villages after understanding the objectives of scheme. With continuous bilateral efforts from farmers and Surti field unit, around 10-20 village level goat cooperatives had been started in these tribal villages. One (1) five day training programs entitled "Profitable goat farming through scientific methodologies" was organized by Surti unit in which 37 farmers participated. Additionally, four (4) one day on campus trainings benefiting 210 farmers in collaboration with ATMA project were conducted. Five research papers had been published from the research work done on Surti goats under the scheme. Additionally, one success story entitled "Packaged Goat Milk: An innovation for social cause among tribal" had been documented.

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

Four clusters names Bara, Tilpuri, Bhimtal and Kunda were established. A total of 1178 kids using 40 bucks and 661 doe have been produced during the period. The average values for body weight were observed as 1.89 ± 0.02 , 9.75 ± 0.08 , 13.09 ± 0.10 , 16.69 ± 0.13 and 20.05 ± 0.20 kg, respectively at birth, 3, 6, 9 and 12 months of age. Corresponding values for body height were 28.31 ± 0.08 , 47.25 ± 0.19 , 51.30 ± 0.26 , 56.02 ± 0.18 and 59.91 ± 0.20 cm, for body length 26.68 ± 0.10 , 44.10 ± 0.17 , 47.84 ± 0.24 , 51.68 ± 0.17 and 55.19 ± 0.23 cm and for chest girth 29.01 ± 0.08 , 48.52 ± 0.19 , 52.70 ± 0.26 , 57.26 ± 0.20 and 60.53 ± 0.28 cm, respectively at birth, 3, 6, 9 and 12 months of age. The overall milk yield in 30, 60, 90 and 120 days were 14.81 ± 0.26 , 35.98 ± 0.85 , 54.05 ± 1.29 and 71.77 ± 2.16 lt, respectively. Overall lactation length and lactation yield were 114.21 ± 2.04 days and 66.66 ± 2.11 lt, respectively. The overall age at first mating and weight at first mating were recorded as 281.76 ± 16.35 days and 17.33 ± 0.82 kg, respectively. The mortality in the total flock was 11.15%. The kidding rate has been recorded as 1.53 %. Twining and triplet kidding was observed as 48.41 and 2.27% respectively. A nucleus flock of Pantja goats has been established at Pantnagar, where in 41 females and 34 males are being maintained (as on March 31, 2017). During the report period 31 Pantja bucks (total 61) were supplied, out of these 13 bucks (total 17) were died and 39 scrub bucks (total 97) were castrated in the field. To record relevant information in the breeding tract, a detailed questionnaire was prepared and surveys were made on 132 households, rearing 1178 goats (with 35.74% Pantja population) in 19 villages of 4 clusters of U.S. Nagar and Nainital districts. Pantja buckling were castrated at an early age for delicious meat of withers. Goat keepers maintained their flocks within shed (76.52%) with kaccha floor (81.82%) and temporary roof (89.39%) during night and allowed grazing from morning to evening (78.03%) on community land. They did not provide manger (48.48%) but provided concentrate (30.30%) from home available ingredients.

2.1 RESEARCH EVALUATION & MONITORING OF UNITS

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

Weight age Criteria



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AICRP on Goat Improvement

Score Sheet for Evaluation of AICRP Unit

Weightage Criteria

| Activity | Rating Scale | Criteria Value | | | | | |
|--|--------------|---------------------------------------|---------------------------------------|---------------------------------------|--|------------|-----------|
| | | 100% | 90% | 80% | 70% | 60% | Below 60% |
| Implementation of technical programme | 40 | PC's Unit Evaluation | | | | | |
| Timely submission of 6 monthly target & Achievement (Oct-March) | 7.5 | 07.04.2017 | 10.04.2017 | 12.04.2017 | 14.04.2017 | 15.04.2017 | |
| Timely submission of 6 monthly target & Achievement (April-Sept) | 7.5 | 07.10.2016 | 10.10.2016 | 12.10.2016 | 15.10.2016 | ----- | ----- |
| Provisional Annual AUC Submission | 6.5 | 10.04.2017 | 11.04.2017 | 12.04.2017 | 17.04.2016 | 15.04.2017 | |
| Final AUC submission | 6.5 | 20.07.2016 | 24.07.2016 | 26.07.2016 | 28.07.2016 | 31.07.2016 | |
| Timely Submission of Annual Report | 10 | 20.04.2017 | 25.04.2017 | 28.04.2017 | 30.04.2017 | 01.05.2017 | |
| Quarterly submission of Fund Utilization | 5 | Within 7 th day of Quarter | Within 8 th day of Quarter | Within 9 th day of Quarter | Within 10 th day of Quarter | | |
| TSP Report (if applicable) | 3 | 2 nd day of month | 3 rd day of month | 3 rd day of month | 5 th day of month | | |
| Technology Intervention / Demonstration | 2 | | | | | | |
| Training Organized | 10 | 6 | 5 | 4 | 3 | 2 | 1 |
| Percentage of fund Utilization | 2 | 98 | 96 | 94 | 92 | | |
| TOTAL | 100 | | | | | | |

Rating Scale * Criteria Value / 100=Final Score

2.2 RESEARCH EVALUATION : 2016-17

| Project Coordinating Unit, CIRG, Mathura Dr. P.K. Rout, Principal Scientist (AGB) & Incharge, AICRP on Goat Improvement PC'S evaluation : | | | | |
|--|---|---|---|----------------|
| 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"> - Evaluation of Marwari & Ganjam field unit - Preparation of different format - Database on Goat Production - PC Report preparation - Organization of Annual Review Meet & submission of report proceeding - Organization of Progress Monitoring & EFC/SFC Sensitization Meeting - Preparation of SFC - Analysis of Data - Release of fund - Six monthly target & achievement - Preparation of AICRP report since inception - Anthelmintic resistance | <ul style="list-style-type: none"> - Visit to Marwari field unit - Format for Annual report, presentation, Monitoring & evaluation, physiological report, AUC, Specified target & achievement, monthly TSP report along with other necessary format for data recording has been created & circulated among the units. - Proposed SFC for the period of 2017-20 for both AICRP on Goat has been submitted to the council. | <ul style="list-style-type: none"> - Fund release was less and did not receive last installment. - No backward information from the unit for effective monitoring. - Not uploaded the data in GMIS & not replying to emails received from PC unit. | <ul style="list-style-type: none"> - Monitoring & evaluation. - SFC preparation and approval - Implementation of technical programme - Monitoring of precision of data regularly and uniform for all the unit. - Expert system on goat population. - SMS advisory to all the farmers of AICRP | |

Project Coordinator's Unit

ICAR-CIRG, Makhdoom, Uttar Pradesh



Inauguration of GMIS at Krishi Bhavan, New Delhi



Hon'ble Agriculture Minister Shri Radha Mohan Ji launching GMIS at Krishi Bhavan, New Delhi



Team PC Unit with the Director, ICAR-CIRG at Krishi Bhavan, New Delhi



The Director, ICAR-CIRG with Hon'ble Agriculture Minister & The DDG (AS), ICAR



Orientation programme conducted by PC Unit



Explanation by Technical Staff to RA/SRF at farm

Andaman Goat Field Unit

ICAR-CIARI, Port Blair, A&N Island



Andamani Doe



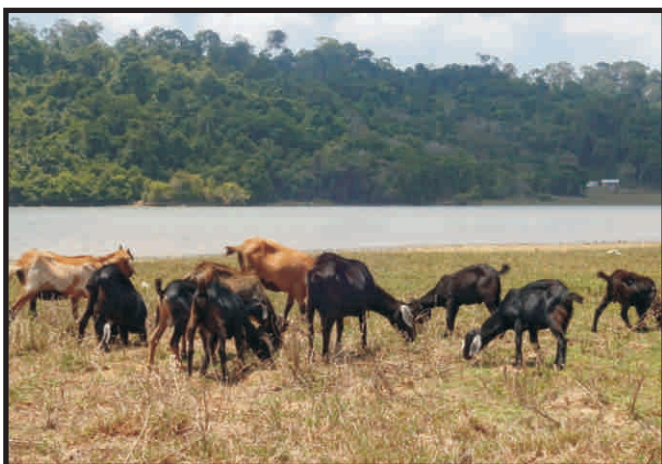
Andamani Buck



Buck Distribution to Farmers



Farmers Centric Distribution



Grazing Flock



Training To Farmers

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

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

PC'S evaluation : Very Good

| Activity assigned and targets fixed for each activity during the period | Activity carried out during the period | Gaps / constraints / Shortfalls / excess and reason thereof, if any | Future programme identifying the activities, time line and targets for each of the activity | Remarks |
|---|---|--|---|---------|
| <p>Performance Recording</p> <ul style="list-style-type: none"> - Performance recording of production & reproduction trait in the adopted villages - Distribution of selected buck for genetic improvement. - Data analysis & interpretation - GMIS Data upload <p>Technology developed</p> <ul style="list-style-type: none"> - Demonstration of technologies in the farmer's field <p>Technology transfer</p> <ul style="list-style-type: none"> - Field demonstration/ Health Camp/ Exposure Visit/ Literature Provided/Goshti/ Meeting Conducted <p>Capacity Building</p> <ul style="list-style-type: none"> - Providing skills to farmers for scientific goat farming. <p>Publication</p> <p>Paper/Article/Abstract / Book/Leaflet pamphlet</p> <ul style="list-style-type: none"> - Linkage created - Other prioritized activities | <ul style="list-style-type: none"> - One new cluster was established. - During the year a total of 129 new farmers and 756 goats were registered under the project in all the clusters. - The overall population growth was 79.37%. - 13 superior breeding bucks distributed. - Overall mortality was 8.6 %. - Mineral mixture was given to 2560 goats, 1679 were treated for different illness and 1768 goats were given deworming. - A total of seven awareness programmes on scientific goat rearing were conducted and in which 148 farmers participated from different villages of both the clusters. - Three extension leaflets on Andaman Local Goat, scientific goat farming & <i>dweepon mein bakiri paalan</i> (in hindi) was prepared and distributed to the registered farmers - Net income/ animal was found to be Rs. 2564/- | <ul style="list-style-type: none"> - Fund release was less and did not receive last installment. - Mortality rate not provided. - Vaccination details not provided. - Kidding rate is low. - Data analysis not carried out. - Milk yield data not reported. - Need to increase number of buck distribution. - Breeding value of each selected buck should be calculated. | <ul style="list-style-type: none"> - Selection of clusters & farmers and Registration of adult doe (No. of animals) = 500 per year - Animal Identification, pedigree and performance recording (No. of animals) = 1000 per year - Selection of male kids and distribution for breeding purpose (No. of animals) = 30 per year - Health Coverage with vaccination and deworming etc. (No. of animals) = 2000 per year - Capacity building of goat keepers and stake holders (No. of trainings) = 8-10 per year - Semen doses cryo-preserved for in situ / ex situ conservation of important breeds (No.) = 1000 per year - 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 | |

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

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

PC'S evaluation : Very Good

| Activity assigned and targets fixed for each activity during the period | Activity carried out during the period | Gaps / constraints / Shortfalls / excess and reason thereof, if any | Future programme identifying the activities, time line and targets for each of the activity | Remarks |
|---|---|--|---|--|
| <p>Performance Recording</p> <ul style="list-style-type: none"> - Performance recording of production & reproduction trait in the adopted villages - Distribution of selected buck for genetic improvement. - Data analysis & interpretation - GMIS Data upload - Technology developed - Demonstration of technologies in the farmer's field <p>Technology transfer</p> <ul style="list-style-type: none"> - Field demonstration/ Health Camp/ Exposure Visit/ Literature Provided/Goshti/ Meeting Conducted <p>Capacity Building</p> <ul style="list-style-type: none"> - Providing skills to farmers for scientific goat farming. <p>Publication</p> <p>Paper/Article/Abstract / Book/Leaflet pamphlet</p> <ul style="list-style-type: none"> - Linkage created - Other prioritized activities | <ul style="list-style-type: none"> - One new village has been registered under the cluster Tepesia, district Kamrup (M) with 18 beneficiaries. - The average mortality rate was 6.79% - 10 elite bucks maintained at the base farm, Goat research Station, AAU, Burnihat has been distributed, - 23 bucks have been exchanged. - 30 new beneficiaries have been registered. - Twelve awareness cum training camps have been organized. - Twenty five vaccination camp to immunize 6241 animals, 22 deworming camp organized in which 5786 animals were dewormed & 32 treatment camps have been organized to treat 1824 animals with different diseases including non-adopted animals. - 325 goats were sold by the beneficiaries. The average family income from goatery has been recorded as 2744.67 per house hold. | <ul style="list-style-type: none"> - Genetic parameter estimation - No information on semen dose of selected males. - Number of observation taken for growth data not provided - Total number of animals covered under each cluster is not provided. - No information on preventive health care carried out. - Milk yield recording not provided. - Providing value of each selected buck should be maintained. - Buck distribution cluster wise should be registered. | <ul style="list-style-type: none"> - Selection of clusters & farmers and Registration of adult doe (No. of animals) = 500 per year - Animal Identification, pedigree and performance recording (No. of animals) = 1000 per year - Selection of male kids and distribution for breeding purpose (No. of animals) = 30 per year - Health Coverage with vaccination and deworming etc. (No. of animals) = 2000 per year - Capacity building of goat keepers and stake holders (No. of trainings) = 8-10 per year - Semen doses cryo-preserved for in situ / ex situ conservation of important breeds (No.) = 1000 per year - 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 | <ul style="list-style-type: none"> - Mortality due to flood - Disease once occur due to flood. - Advisory to manage goats during heavy flood. |

Assam Hill Goat Unit

AAU, Khanpara, Guwahati, Assam



A beneficiary with her goats



Goat Rally and Judging



Exposure Visit



Exposure Visit



Vaccination cum Treatment Camp



Vaccination cum Treatment Camp

Barbari Goat Farm Unit

ICAR-CIRG, Makhdoom, Uttar Pradesh



Barbari Buck



Barbari Flock



Visit by Hon'ble DG, ICAR at Barbari Farm



Visit by Director, ICAR-CIRG at Barbari Farm



Multiplier Flock - Barbari



Grazing Flock - Barbari Breed

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

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

PC'S evaluation : Excellent

| Activity assigned and targets fixed for each activity during the period | Activity carried out during the period | Gaps / constraints / Shortfalls / excess and reason thereof, if any | Future programme identifying the activities, time line and targets for each of the activity | Remarks |
|--|--|--|--|---------|
| <p>Performance Recording</p> <ul style="list-style-type: none"> - Performance recording of production & reproduction trait in the adopted villages - Distribution of selected buck for genetic improvement. - Data analysis & interpretation - GMIS Data upload <p>Technology developed</p> <ul style="list-style-type: none"> - Demonstration of technologies in the farmer's field <p>Technology transfer</p> <ul style="list-style-type: none"> - Field demonstration/ Health Camp/ Exposure Visit/ Literature Provided/Goshti/ Meeting Conducted <p>Capacity Building</p> <ul style="list-style-type: none"> - Providing skills to farmers for scientific goat farming. <p>Publication</p> <p>Paper/Article/Abstract/ Book/Leaflet pamphlet</p> <ul style="list-style-type: none"> - Linkage created <p>Other prioritized activities</p> | <ul style="list-style-type: none"> - The population growth, kidding percentage, kidding rate (litre size) and flock survivability in 2016-17 were 145%, 140%, 1.51 and 2.9%, respectively. - 308 superior germ-plasm supplied to goat farmers and development agencies lactation performance increase by 12-16% - The genomic DNA was isolated from the blood samples of the animals and these samples are screened for identification of polymorphism in fecundity related genes (Kisspeptin). | <ul style="list-style-type: none"> - Semen of selected buck need to be preserved. - Feedlot study for growth need to be carried out. | <ul style="list-style-type: none"> - Selection of clusters & farmers and Registration of adult doe (No. of animals) = 500 per year - Animal Identification, pedigree and performance recording (No. of animals) = 1000 per year - Selection of male kids and distribution for breeding purpose (No. of animals) = 30 per year - Health Coverage with vaccination and deworming etc. (No. of animals) = 2000 per year - Capacity building of goat keepers and stake holders (No. of trainings) = 8-10 per year - Semen doses cryo-preserved for in situ / ex situ conservation of important breeds (No.) = 1000 per year - 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 | |

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

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

PC'S evaluation : Good

| Activity assigned and targets fixed for each activity during the period | Activity carried out during the period | Gaps / constraints / Shortfalls / excess and reason thereof, if any | Future programme identifying the activities, time line and targets for each of the activity | Remarks |
|---|--|--|--|--|
| <p>Performance Recording</p> <ul style="list-style-type: none"> - Performance recording of production & reproduction trait in the adopted villages - Distribution of selected buck for genetic improvement. - Data analysis & interpretation <p>GMIS Data upload</p> <p>Technology Developed</p> <ul style="list-style-type: none"> - Demonstration of technologies in the farmer's field <p>Technology transfer</p> <ul style="list-style-type: none"> - Field demonstration/ Health Camp/ Exposure Visit/ Literature Provided/Goshti/ Meeting Conducted <p>Capacity Building</p> <ul style="list-style-type: none"> - Providing skills to farmers for scientific goat farming. <p>Publication</p> <p>Paper/Article/Abstract / Book/Leaflet pamphlet</p> <ul style="list-style-type: none"> - Linkage created - Other prioritized activities | <ul style="list-style-type: none"> - 7 bucks were purchased from the flocks farmer's of adopted villages and they were exchanged from one center to another to avoid the inbreeding. - Kidding rate was estimated as 1.69. - 7 bucks & 28 Does (on the basis of growth and multiple birth) were selected from different centers and distributed among 7 farmers under TSP program. - Preventive health care with PPR (2780 goats), dipping (3519 goats) & deworming of 3607 goats have been done. - Mortality was reduced up to 2.78 percent at the farmer flock. - 72 One day training, one 3 day training, 40 Ten day training, 02 Exposure visit & 02 capacity building programs were conducted. | <ul style="list-style-type: none"> - The number of animal covered for performance recording was 282 only. - Income per goat not given - Genetic parameter estimation - No cluster-wise information- Distribution of category farmers not provided - Less number of bucks distributed. - The population number of data is less than 300. - Details of training types/ name of training should be provided. - Details of leaflet & technologies demonstrated in the field are not provided. - Milk recording data not provided. - Technology adoption rate not provided. | <ul style="list-style-type: none"> - Selection of clusters & farmers and Registration of adult doe (No. of animals) = 500 per year - Animal Identification, pedigree and performance recording (No. of animals) = 1000 per year - Selection of male kids and distribution for breeding purpose (No. of animals) = 30 per year - Health Coverage with vaccination and deworming etc. (No. of animals) = 2000 per year - Capacity building of goat keepers and stake holders (No. of trainings) = 8-10 per year - Semen doses cryo-preserved for in situ / ex situ conservation of important breeds (No.) = 1000 per year - 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 | <ul style="list-style-type: none"> - Please provide the category of Farmers under SC/ST and General Category - Why Malathion is given for treatment. Malathion should not be used for dipping - Details of proposed goat based technologies to be provided. |

Bengal Goat Field Unit

BAU, Kanke, Ranchi, Jharkhand



Bengal Goat Flock



Field Grazing Flock



Exposure Visit for SC/ST Farmers



Exposure cum advisory camp to SC/ST Farmers



Preventive Health Card



Distribution of Mineral Mixture

Black Bengal Goat Field Unit

WBUV & FS, Kolkata, West Bengal



Feeding habit of Black Bengal Goat in Sundarban Area



Prolific Black Bengal Buck



Organization of Health Camp



Taking of body measurement



Training of Tribal Farmers



Animal Distribution to Tribal Farmers

| <p align="center">Black Bengal Goat Field Unit, WBUV and FS, Kolkata, West Bengal PI - Dr. Manorajan Roy, Profesor (AG&B) PC'S evaluation : Very Good</p> | | | | |
|--|---|---|--|---------|
| Activity assigned and targets fixed for each activity during the period | Activity carried out during the period | Gaps / constraints / Shortfalls / excess and reason thereof, if any | Future programme identifying the activities, time line and targets for each of the activity | Remarks |
| <p>Performance Recording</p> <ul style="list-style-type: none"> - Performance recording of production & reproduction trait in the adopted villages - Distribution of selected buck for genetic improvement. - Data analysis & interpretation <p>GMIS Data upload</p> <p>Technology developed</p> <ul style="list-style-type: none"> - Demonstration of technologies in the farmer's field <p>Technology transfer</p> <ul style="list-style-type: none"> - Field demonstration/ Health Camp/ Exposure Visit/ Literature Provided/Goshti/ Meeting Conducted <p>Capacity Building</p> <ul style="list-style-type: none"> - Providing skills to farmers for scientific goat farming. <p>Publication</p> <p>Paper/Article/Abstract/ Book/Leaflet pamphlet</p> <ul style="list-style-type: none"> - Linkage created - Other prioritized activities | <ul style="list-style-type: none"> - The kidding rate (litter size) was recorded 1.79 %. - Overall mortality restricted to 6.77 % - 65 Health, Deworming & Vaccination camp has been organized. - 20 bucks were distributed in addition to previous bucks. - 02 Exposure visit, 22 Seasonal Advisory & 20 Goshti Meeting & 14 Awareness programme has been conducted - 11 Training for farmers has been organized - Innovation in low cost feeder for goats has been observed- Income/doe is ₹. 2860.81/- - Linkages have been made with different Government bodies, KVK and NGO's | <ul style="list-style-type: none"> - Genetic parameter estimation not carried out - Preventive health care details not provided. - Publication details needs to be provided. - Training details needs to be provided. - Buck distribution should be more in the adopted villages. - Technology adoption rate need to be provided. - Package of practices should be published. - Breeding value of each buck need to be reported to PC Unit. | <ul style="list-style-type: none"> - Selection of clusters & farmers and Registration of adult doe (No. of animals) = 500 per year - Animal Identification, pedigree and performance recording (No. of animals) = 1000 per year - Selection of male kids and distribution for breeding purpose (No. of animals) = 30 per year - Health Coverage with vaccination and deworming etc. (No. of animals) = 2000 per year - Capacity building of goat keepers and stake holders (No. of trainings) = 8-10 per year - Semen doses cryo-preserved for in situ / ex situ conservation of important breeds (No.) = 1000 per year - 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 | |

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

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

PC'S evaluation : Good

| Activity assigned and targets fixed for each activity during the period | Activity carried out during the period | Gaps / constraints / Shortfalls / excess and reason thereof, if any | Future programme identifying the activities, time line and targets for each of the activity | Remarks |
|--|--|--|--|---------|
| <p>Performance Recording</p> <ul style="list-style-type: none"> - Performance recording of production & reproduction trait in the adopted villages - Distribution of selected buck for genetic improvement. - Data analysis & interpretation - GMIS Data upload <p>Technology developed</p> <ul style="list-style-type: none"> - Demonstration of technologies in the farmer's field <p>Technology transfer</p> <ul style="list-style-type: none"> - Field demonstration/ Health Camp/ Exposure Visit/ Literature Provided/Goshti/ Meeting Conducted <p>Capacity Building</p> <ul style="list-style-type: none"> - Providing skills to farmers for scientific goat farming. <p>Publication</p> <p>Paper/Article/Abstract/ Book/Leaflet pamphlet</p> <ul style="list-style-type: none"> - Linkage created - Other prioritized activities | <ul style="list-style-type: none"> - The overall average pashmina production of all the three clusters was 275±12.54 - The overall kidding percentage was 77.81 %. the kid mortality was 22.77 % - The overall mortality rate was 8.76 % - Breeding bucks with an annual Pashmina yield of 621gms. - Farm compost using goat manure, tree leaves and local bangma (malted barley) generated - 938 goats were sold - Pashmina Shawl Brand "Changthang Pahmina" Developed using pure pashmina fibre | <ul style="list-style-type: none"> - Semen dose not preserved. - Farmer's centric input not given- Publication details not provided. - Buck distribution details not provided. - Breeding value of selected buck should be maintained. - Milk production data need to be provided. - Package of practices needs to be developed. | <ul style="list-style-type: none"> - Selection of clusters & farmers and Registration of adult doe (No. of animals) = 500 per year - Animal Identification, pedigree and performance recording (No. of animals) = 1000 per year - Selection of male kids and distribution for breeding purpose (No. of animals) = 30 per year - Health Coverage with vaccination and deworming etc. (No. of animals) = 2000 per year - Capacity building of goat keepers and stake holders (No. of trainings) = 8-10 per year - Semen doses cryo-preserved for in situ / ex situ conservation of important breeds (No.) = 1000 per year - 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 | |

Changthangi Goat Field Unit

SKUAST, Kashmir, Leh-Ladakh, J&K



Elite Buck 162-T, Angehuk-KNK, which produces 973 gms of Pashmina/annum



Pashmina Flocks at Korzok Tsomoriri



Training and Distribution of medicines among the beneficiaries



Unit stall at Kisan Mela Kihar Leh



Combing of Pashmina Goat traditional method



Nomads with their "Value added woolen products

Gaddi Goat Field Unit

HPKVV, Palampur, Himachal Pradesh



Selected Flock at Pasture



Farmer with Bedding Buck



GADDI : The Traditional Way of Life



Vaccination of a Flock



Buck Distribution to Farmers

Gaddi Goat Field Unit, HPKVV, Palampur, Himachal Pradesh

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

PC'S evaluation : Excellent

| Activity assigned and targets fixed for each activity during the period | Activity carried out during the period | Gaps / constraints / Shortfalls / excess and reason thereof, if any | Future programme identifying the activities, time line and targets for each of the activity | Remarks |
|---|---|--|--|---------|
| <p>Performance Recording</p> <ul style="list-style-type: none"> - Performance recording of production & reproduction trait in the adopted villages - Distribution of selected buck for genetic improvement. - Data analysis & interpretation - GMIS Data upload <p>Technology developed</p> <ul style="list-style-type: none"> - Demonstration of technologies in the farmer's field <p>Technology transfer</p> <ul style="list-style-type: none"> - Field demonstration/ Health Camp/ Exposure Visit/ Literature Provided/Goshti/ Meeting Conducted <p>Capacity Building</p> <ul style="list-style-type: none"> - Providing skills to farmers for scientific goat farming. <p>Publication</p> <p>Paper/Article/Abstract / Book/Leaflet pamphlet</p> <ul style="list-style-type: none"> - Linkage created - Other prioritized activities | <ul style="list-style-type: none"> - The population growth & incidence of twin birth was observed 109.45 & 21.56% respectively. - Kidding was 67.35% - 47 male kids of 4-6 months age group were purchased from farmer's flocks after primary selection and reared up to the age of sexual maturity, at Palampur center. - A total of 30 males were finally distributed to 30 different farmers. - Health coverage under migratory field conditions viz. vaccination against PPR (1500 doses), deworming (1450 animals) against endo-parasites after faecal sample analysis, periodic health checkups etc. - Strategic supplementary feeding was also provided in the form of mineral mixture (300 Kg) and concentrate feed (25 qtls.). | <ul style="list-style-type: none"> - No information on training conducted. - Details of Intervention during migration - Genetic parameter estimation not carried out - Not provided any Farmer centric input-Publication details needs to be provided. - Semen doses need to be preserved. - Cluster wise and category wise details needs to be provided. - Breeding value of selected bucks need to be maintained. - Milk recording data not provided - Package of practices need to be published. | <ul style="list-style-type: none"> - Selection of clusters & farmers and Registration of adult doe (No. of animals) = 500 per year - Animal Identification, pedigree and performance recording (No. of animals) = 1000 per year - Selection of male kids and distribution for breeding purpose (No. of animals) = 30 per year - Health Coverage with vaccination and deworming etc. (No. of animals) = 2000 per year - Capacity building of goat keepers and stake holders (No. of trainings) = 8-10 per year - Semen doses cryo-preserved for in situ / ex situ conservation of important breeds (No.) = 1000 per year - 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 | |

Ganjam Goat Field Unit, OUAT, Bhubaneswar, Orissa

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

PC'S evaluation : Good

| Activity assigned and targets fixed for each activity during the period | Activity carried out during the period | Gaps / constraints / Shortfalls / excess and reason thereof, if any | Future programme identifying the activities, time line and targets for each of the activity | Remarks |
|--|---|---|--|---------|
| <p>Performance Recording</p> <ul style="list-style-type: none"> - Performance recording of production & reproduction trait in the adopted villages - Distribution of selected buck for genetic improvement. - Data analysis & interpretation - GMIS Data upload - Technology developed - Demonstration of technologies in the farmer's field Technology transfer - Field demonstration/ Health Camp/ Exposure Visit/ Literature Provided/Goshti/ Meeting Conducted Capacity Building - Providing skills to farmers for scientific goat farming. Publication Paper/Article/Abstract/ Book/Leaflet pamphlet - Linkage created - Other prioritized activities | <ul style="list-style-type: none"> - 910 animals tagged during the year with 1355 kiddings - 819 number of animals sold during the year. - Preventive Health care and vaccination are routinely being carried out with vaccination of 3000 dosages of PPR, 3000 dosages of goat pox, 1200 dosages of Enterotoxaemia vaccines and 670 dosages of FMD - 3 training programmes were organised in which 50 goat farmers were benefited. | <ul style="list-style-type: none"> - No information provided on number of bucks distributed for breeding purpose. - No information on clusters and new farmers adopted during the year. - Body weight & milk yield analysis have not been carried out. - Training details - Cluster-wise and category wise details have not been provided. - Total number of animals covered under the project - Breeding value of selected bucks need to be maintained & sent to PC unit. - Milk recording data need to reported - Package of practices need to be published. | <ul style="list-style-type: none"> - Selection of clusters & farmers and Registration of adult doe (No. of animals) = 500 per year - Animal Identification, pedigree and performance recording (No. of animals) = 1000 per year - Selection of male kids and distribution for breeding purpose (No. of animals) = 30 per year - Health Coverage with vaccination and deworming etc. (No. of animals) = 2000 per year - Capacity building of goat keepers and stake holders (No. of trainings) = 8-10 per year - Semen doses cryo-preserved for in situ / ex situ conservation of important breeds (No.) = 1000 per year - 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 | |

Ganjam Goat Field Unit

OUAT, Bhubaneswar, Orissa



Training to Farmers



Grazing Flock



Visit of Project Incharge, AICRP (G) along with Dr. Vineet Bhasin, PS, ICAR



Interaction with Progressive Goat Farmers



Training to Farmers



Group of Progressive Goat Farmers

Himalayan Local Goat Field Unit

ICAR-IVRI Campus, Mukteshwar



Exposure visit of farms by veterinary officers of different states during training



Road side grazing practice by farmers



Animal Health Camp at Fatqual Dunga Village of Almora District



Twin birth at field after intervention



Grazing practice of goat at hill terrace



Measurement of body Conformation of goat

| <p align="center">Himalayan Local Goat Field Unit, ICAR-IVRI Campus, Mukteshwar PI - Dr. A. K. Sharma, Princial Scientist PC'S evaluation : Good</p> | | | | |
|--|---|--|--|---------|
| Activity assigned and targets fixed for each activity during the period | Activity carried out during the period | Gaps / constraints / Shortfalls / excess and reason thereof, if any | Future programme identifying the activities, time line and targets for each of the activity | Remarks |
| <p>Performance Recording</p> <ul style="list-style-type: none"> - Performance recording of production & reproduction trait in the adopted villages - Distribution of selected buck for genetic improvement. - Data analysis & interpretation - GMIS Data upload <p>Technology developed</p> <ul style="list-style-type: none"> - Demonstration of technologies in the farmer's field <p>Technology transfer</p> <ul style="list-style-type: none"> - Field demonstration/ Health Camp/ Exposure Visit/ Literature Provided/Goshti/ Meeting Conducted <p>Capacity Building</p> <ul style="list-style-type: none"> - Providing skills to farmers for scientific goat farming. <p>Publication</p> <p>Paper/Article/Abstract/ Book/Leaflet pamphlet</p> <ul style="list-style-type: none"> - Linkage created - Other prioritized activities | <ul style="list-style-type: none"> - During the year 92 farmers have been registered and 355 adult breedable does along with 63 kids were also tagged from cluster 1 & 2 - Five animal healths cum awareness camps were organized in field level - Twenty bucks (3 to 6 months) are purchased. - Five breed able bucks & 27 does have been selected initially for breeding purpose on the basis of adult body weight and breed characteristics | <ul style="list-style-type: none"> - Less number of goats has been covered under the project. - No information of buck distributed. - Not information on health care measures to animals. - No information on whether animals adopted or not. - Body weight has not been analysed - Milk yield recording need to be carried out. - Tagging of animals need to be carried out - No information on farmer centric input. | <ul style="list-style-type: none"> - Selection of clusters & farmers and Registration of adult doe (No. of animals) = 500 per year - Animal Identification, pedigree and performance recording (No. of animals) = 1000 per year - Selection of male kids and distribution for breeding purpose (No. of animals) = 30 per year - Health Coverage with vaccination and deworming etc. (No. of animals) = 2000 per year - Capacity building of goat keepers and stake holders (No. of trainings) = 8-10 per year - Semen doses cryo-preserved for in situ / ex situ conservation of important breeds (No.) = 1000 per year - 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 | |

| <p align="center">Jamunapari Goat Farm Unit, ICAR-CIRG, Makhdoom, Uttar Pradesh PI - Dr. P. K. Rout, Principal Scientist (AG&B) PC'S evaluation : Excellent</p> | | | | |
|--|--|---|--|---------|
| Activity assigned and targets fixed for each activity during the period | Activity carried out during the period | Gaps / constraints / Shortfalls / excess and reason thereof, if any | Future programme identifying the activities, time line and targets for each of the activity | Remarks |
| <p>Performance Recording</p> <ul style="list-style-type: none"> - Performance recording of production & reproduction trait in the adopted villages - Distribution of selected buck for genetic improvement. - Data analysis & interpretation - GMIS Data upload <p>Technology developed</p> <ul style="list-style-type: none"> - Demonstration of technologies in the farmer's field <p>Technology transfer</p> <ul style="list-style-type: none"> - Field demonstration/ Health Camp/ Exposure Visit/ Literature Provided/Goshti/ Meeting Conducted <p>Capacity Building</p> <ul style="list-style-type: none"> - Providing skills to farmers for scientific goat farming. <p>Publication</p> <p>Paper/Article/Abstract/ Book/Leaflet pamphlet</p> <ul style="list-style-type: none"> - Linkage created - Other prioritized activities | <ul style="list-style-type: none"> - The nucleus herd is maintaining about 311 breedable adult does. - The overall mortality of the flock during the year 2016-17 was 5.69 % and annual culling rate was 5.79 %. - 154 improved animals were distributed to goat breeders. - Genetic parameter estimates were obtained from 6590 records generated between 1982 to 2013 from 5922 animals in the pedigree over 13 generations. - Breeding efficiency & kidding percent on the basis of does selected for breeding were 95.88% and 106.88%, respectively - The kidding rate was 1.35. | <ul style="list-style-type: none"> - Semen of selected bucks should be conserved. - Milk recording of dam line need to be evaluated | <ul style="list-style-type: none"> - Selection of clusters & farmers and Registration of adult doe (No. of animals) = 500 per year - Animal Identification, pedigree and performance recording (No. of animals) = 1000 per year - Selection of male kids and distribution for breeding purpose (No. of animals) = 30 per year - Health Coverage with vaccination and deworming etc. (No. of animals) = 2000 per year - Capacity building of goat keepers and stake holders (No. of trainings) = 8-10 per year - Semen doses cryo-preserved for in situ / ex situ conservation of important breeds (No.) = 1000 per year - 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 | |

Jamunapari Goat Farm Unit

ICAR-CIRG, Makhdoom, Uttar Pradesh



**Visit at Jamunapari Unit by
Hon'ble DG, ICAR**



**Hon'ble DG, ICAR with All
Jamunapari Staff**



Adult Jamunapari Doe



Adult Jamunapari Buck



Nucleus Herd - At Grazing Time



Malabari Goat Field Unit

KV&ASU, Mannuthy, Thrissur, Kerala



Malabari doe with kid



Malabari Buck Field



Training on Commercial Goat Farming



Farmer centric Distribution



Certificate of Training : Field Staff Training



Training to field Staff

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

PI - Dr. Thirupathy Venkatechalapathy, Assistant Professor, (AG&B)

PC'S evaluation : Excellent

| Activity assigned and targets fixed for each activity during the period | Activity carried out during the period | Gaps / constraints / Shortfalls / excess and reason thereof, if any | Future programme identifying the activities, time line and targets for each of the activity | Remarks |
|--|---|--|--|---------|
| <p>Performance Recording</p> <ul style="list-style-type: none"> - Performance recording of production & reproduction trait in the adopted villages - Distribution of selected buck for genetic improvement. - Data analysis & interpretation - GMIS Data upload <p>Technology developed</p> <ul style="list-style-type: none"> - Demonstration of technologies in the farmer's field <p>Technology transfer</p> <ul style="list-style-type: none"> - Field demonstration/ Health Camp/ Exposure Visit/ Literature Provided/Goshti/ Meeting Conducted <p>Capacity Building</p> <ul style="list-style-type: none"> - Providing skills to farmers for scientific goat farming. <p>Publication Paper/Article/Abstract / Book/Leaflet pamphlet</p> <ul style="list-style-type: none"> - Linkage created - Other prioritized activities | <ul style="list-style-type: none"> - A total of 214 farmers have been registered including 139 women. - 1557 adult female goats have been provided with insurance coverage under the project. - 26 superior bucks have been distributed to farmers for breeding. - The population growth recorded was 67.47%. - An increase of body weight of 0.17kg & 0.75kg were achieved at birth & 6 months age. - The kidding rate was 1.65%. - Mortality rate was reduced to 4.57%. - As capacity building, 5 hands on training with 2 days duration to 65 farmers and 18 class of 2-3 hours duration to 646 farmers were organized. - Technology for different goat milk products and pseudomonas enriched goat manure were standardized. - Published a monograph on Malabari goat, one training manual, 7 brochures, 2 technical papers, 8 research papers and 12 research abstracts | <ul style="list-style-type: none"> - Low population growth - Less number of animals covered under the project. - Buck distribution should be more in adopted villages. - Genetic parameter analysis needs to be carried out. - Breeding value of all the selected buck need to be maintain and send to PC Unit. | <ul style="list-style-type: none"> - Selection of clusters & farmers and Registration of adult doe (No. of animals) = 500 per year - Animal Identification, pedigree and performance recording (No. of animals) = 1000 per year - Selection of male kids and distribution for breeding purpose (No. of animals) = 30 per year - Health Coverage with vaccination and deworming etc. (No. of animals) = 2000 per year - Capacity building of goat keepers and stake holders (No. of trainings) = 8-10 per year - Semen doses cryo-preserved for in situ / ex situ conservation of important breeds (No.) = 1000 per year - 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 | |

Marwari Goat Field Unit, RAJUVAS, Bikaner, Rajasthan

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

PC'S evaluation : Good

| Activity assigned and targets fixed for each activity during the period | Activity carried out during the period | Gaps / constraints / Shortfalls / excess and reason thereof, if any | Future programme identifying the activities, time line and targets for each of the activity | Remarks |
|--|--|--|--|---------|
| <p>Performance Recording</p> <ul style="list-style-type: none"> - Performance recording of production & reproduction trait in the adopted villages - Distribution of selected buck for genetic improvement. - Data analysis & interpretation - GMIS Data upload - Technology developed - Demonstration of technologies in the farmer's field- Technology transfer - Field demonstration/ Health Camp/ Exposure Visit/ Literature Provided/Goshti/ Meeting Conducted - Capacity Building - Providing skills to farmers for scientific goat farming. - Publication- Paper/Article/Abstract/ Book/Leaflet pamphlet - Linkage created - Other prioritized activities | <ul style="list-style-type: none"> - The population growth was 124.39% - The overall body weights (2012-16) at different stages of growth were 2.65±0.003 kg at birth, 8.95±0.010 at 3 month, 13.73±0.017 kg at 6 month, 18.07±0.022 kg at 9 month, 25.28±0.030 at 12 month of age - 17 bucks distributed, Ten bucks and 16 females elite animals were sold. - The kidding percentage and kidding rate was 129.09 and 1.33. - The overall mortality was 3.53 % - Around 25823 goats were covered under health coverage | <ul style="list-style-type: none"> - Animals are not tagged in project area. - Details of buck distribution not provided. - Genetic parameter estimation - Breeding value of selected bucks need to be maintain and send to PC Unit. - Package of practices need to be developed. - Not included any Co-PI in the project. | <ul style="list-style-type: none"> - Selection of clusters & farmers and Registration of adult doe (No. of animals) = 500 per year - Animal Identification, pedigree and performance recording (No. of animals) = 1000 per year - Selection of male kids and distribution for breeding purpose (No. of animals) = 30 per year - Health Coverage with vaccination and deworming etc. (No. of animals) = 2000 per year - Capacity building of goat keepers and stake holders (No. of trainings) = 8-10 per year - Semen doses cryo-preserved for in situ / ex situ conservation of important breeds (No.) = 1000 per year - 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 | |

Marwari Goat Field Unit

RAJUVAS, Bikenar, Rajasthan



Osmanabadi Goat Field Unit

NARI, Phaltan, Maharashtra



Osmanabadi Doe



Grazing Flock



Woman Goat Farmer



Goat Farmer



Body Height



Buck Distribution

Osmanabadi Goat Field Unit, NARI, Phaltan, Maharashtra

PI - Dr. Chanda Nimbkar, Director

PC'S evaluation : Excellent

| Activity assigned and targets fixed for each activity during the period | Activity carried out during the period | Gaps / constraints / Shortfalls / excess and reason thereof, if any | Future programme identifying the activities, time line and targets for each of the activity | Remarks |
|---|--|---|--|---------|
| <p>Performance Recording</p> <ul style="list-style-type: none"> - Performance recording of production & reproduction trait in the adopted villages - Distribution of selected buck for genetic improvement. - Data analysis & interpretation - GMIS Data upload <p>Technology developed</p> <ul style="list-style-type: none"> - Demonstration of technologies in the farmer's field <p>Technology transfer</p> <ul style="list-style-type: none"> - Field demonstration/ Health Camp/ Exposure Visit/ Literature Provided/Goshti/ Meeting Conducted <p>Capacity Building</p> <ul style="list-style-type: none"> - Providing skills to farmers for scientific goat farming. <p>Publication</p> <p>Paper/Article/ Abstract/ Book/Leaflet pamphlet</p> <ul style="list-style-type: none"> - Linkage created - Other prioritized activities | <ul style="list-style-type: none"> - 768 adult does are being recorded - Mortality across all age groups & sexes was 4.5%. This has reduced from 6 to 7.5% in the last few years - Twelve more Osmanabadi bucks were purchased - 6 training programs for preventive health care of goats & first-aid treatment in which 71 goat keepers participated. - Six Goshti/ meetings & 2 exposure visits of women were conducted - Nine information booklets in Marathi language have been distributed to promote better goat management practices. - About 34,000 straws of frozen semen have been produced at NDRI. | <ul style="list-style-type: none"> - Details of four centers should be provided. - Number of animals covered was less in different centers - Less Number of bucks are distributed. - Genetic parameter estimation - Body weight & milk yield data reported - Cluster-wise and category wise farmer's details not provided. - No farmer centric input provided. | <ul style="list-style-type: none"> - Selection of clusters & farmers and Registration of adult doe (No. of animals) = 500 per year - Animal Identification, pedigree and performance recording (No. of animals) = 1000 per year - Selection of male kids and distribution for breeding purpose (No. of animals) = 30 per year - Health Coverage with vaccination and deworming etc. (No. of animals) = 2000 per year - Capacity building of goat keepers and stake holders (No. of trainings) = 8-10 per year - Semen doses cryo-preserved for in situ / ex situ conservation of important breeds (No.) = 1000 per year - 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 | |

Sangamneri Goat Field Unit, MPKV, Rahuri, Maharashtra

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

PC'S evaluation : Good

| Activity assigned and targets fixed for each activity during the period | Activity carried out during the period | Gaps / constraints / Shortfalls / excess and reason thereof, if any | Future programme identifying the activities, time line and targets for each of the activity | Remarks |
|--|--|---|--|---------|
| <p>Performance Recording</p> <ul style="list-style-type: none"> - Performance recording of production & reproduction trait in the adopted villages - Distribution of selected buck for genetic improvement. - Data analysis & interpretation - GMIS Data upload <p>Technology developed</p> <ul style="list-style-type: none"> - Demonstration of technologies in the farmer's field <p>Technology transfer</p> <ul style="list-style-type: none"> - Field demonstration/ Health Camp/ Exposure Visit/ Literature Provided/Goshti/ Meeting Conducted <p>Capacity Building</p> <ul style="list-style-type: none"> - Providing skills to farmers for scientific goat farming. <p>Publication</p> <p>Paper/Article/Abstract/ Book/Leaflet pamphlet</p> <ul style="list-style-type: none"> - Linkage created - Other prioritized activities | <ul style="list-style-type: none"> - Registered 2023 breedable does in four clusters. - Rotated 43 (23+20 KVK) elite bucks in the selected clusters. - Population of Sangamneri goats increased by 40.65% - The improvement in milk yield over the baseline population was 51.82% - Produced and stored 5550 frozen semen doses of 12 elite bucks at FS Lab, MPKV, Rahuri - Purchased 17 elite female and 19 bucks. - Supplied 14136 F.S. doses to field LSS on experimental basis - Organized one Goat Exhibition, 3 Vaccination camps, 13 Group Meetings, 12 Training Programmes organized by KVK and 7 Training Programs in collaboration with various organization viz ATMA, MKCL, BAIF etc. | <ul style="list-style-type: none"> - Not uploaded any data in GMIS - Tagging is not proper in adopted villages. - Baseline data not provided - Genetic parameter analyses need to be carried out. - Breeding value of selected buck need to be maintained. | <ul style="list-style-type: none"> - Selection of clusters & farmers and Registration of adult doe (No. of animals) = 500 per year - Animal Identification, pedigree and performance recording (No. of animals) = 1000 per year - Selection of male kids and distribution for breeding purpose (No. of animals) = 30 per year - Health Coverage with vaccination and deworming etc. (No. of animals) = 2000 per year - Capacity building of goat keepers and stake holders (No. of trainings) = 8-10 per year - Semen doses cryo-preserved for in situ / ex situ conservation of important breeds (No.) = 1000 per year - 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 | |

Sangamneri Goat Field Unit

MPKV, Rahuri, Maharashtra



Goat with Little Boy



Goat Show



A Self-employed farmer



Distribution of necessities at Goat Show



Exposure Visit to Farmers



Training to Women Farmers

Sirohi Goat Farm Unit

ICAR-CSWRI, Avikanagar, Rajasthan



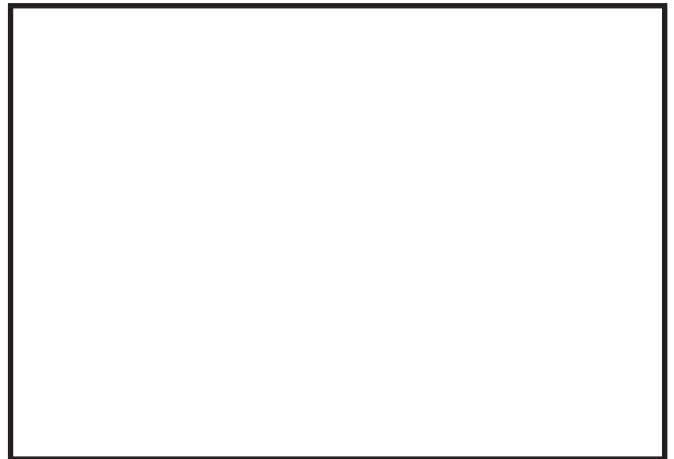
Barbari Buck



Barbari Flock



Visit by Hon'ble DG, ICAR at Barbari Farm



Visit by Director, ICAR-CIRG at Barbari Farm



Multiplier Flock - Barbari



Grazing Flock - Barbari Breed

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

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

PC'S evaluation : Excellent

| Activity assigned and targets fixed for each activity during the period | Activity carried out during the period | Gaps / constraints / Shortfalls / excess and reason thereof, if any | Future programme identifying the activities, time line and targets for each of the activity | Remarks |
|--|---|---|--|---------|
| <p>Performance Recording</p> <ul style="list-style-type: none"> - Performance recording of production & reproduction trait in the adopted villages - Distribution of selected buck for genetic improvement. - Data analysis & interpretation - GMIS Data upload <p>Technology developed</p> <ul style="list-style-type: none"> - Demonstration of technologies in the farmer's field <p>Technology transfer</p> <ul style="list-style-type: none"> - Field demonstration/ Health Camp/ Exposure Visit/ Literature Provided/Goshti/ Meeting Conducted <p>Capacity Building</p> <ul style="list-style-type: none"> - Providing skills to farmers for scientific goat farming. <p>Publication</p> <p>Paper/Article/Abstract/ Book/Leaflet pamphlet</p> <ul style="list-style-type: none"> - Linkage created - Other prioritized activities | <ul style="list-style-type: none"> - Overall mortality rate was 2.81%. - 201 animals were sold to the progressive farmers, Government & non-government agencies along with this 2 superior bucks distributed to registered goat farmers under MoU for breeding and improvement of their livestock - Four KVKs were provided with breeding males and females for establishment of Sirohi goat units | <ul style="list-style-type: none"> - Details of semen preserved not provided - Breeding value of selected buck need to be maintained. - Specialized size line for growth need to be developed. - Complete Data not uploaded in GMIS | <ul style="list-style-type: none"> - Selection of clusters & farmers and Registration of adult doe (No. of animals) = 500 per year - Animal Identification, pedigree and performance recording (No. of animals) = 1000 per year - Selection of male kids and distribution for breeding purpose (No. of animals) = 30 per year - Health Coverage with vaccination and deworming etc. (No. of animals) = 2000 per year - Capacity building of goat keepers and stake holders (No. of trainings) = 8-10 per year - Semen doses cryo-preserved for in situ / ex situ conservation of important breeds (No.) = 1000 per year - 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 | |

Sirohi Field Unit, Veterinary Collage, Vallabh Nagar

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

PC'S evaluation : Excellent

| Activity assigned and targets fixed for each activity during the period | Activity carried out during the period | Gaps / constraints / Shortfalls / excess and reason thereof, if any | Future programme identifying the activities, time line and targets for each of the activity | Remarks |
|---|---|--|---|---------|
| <p>Performance Recording</p> <ul style="list-style-type: none"> - Performance recording of production & reproduction trait in the adopted villages - Distribution of selected buck for genetic improvement. - Data analysis & interpretation - GMIS Data upload <p>Technology developed</p> <ul style="list-style-type: none"> - Demonstration of technologies in the farmer's field <p>Technology transfer</p> <ul style="list-style-type: none"> - Field demonstration/ Health Camp/ Exposure Visit/ Literature Provided/Goshti/ Meeting Conducted <p>Capacity Building</p> <ul style="list-style-type: none"> - Providing skills to farmers for scientific goat farming. <p>Publication</p> <p>Paper/Article/Abstract/Book/Leaflet pamphlet</p> <ul style="list-style-type: none"> - Linkage created - Other prioritized activities | <ul style="list-style-type: none"> - The total female strength of the project is 1575. - The overall population growth was 77.64%. - Total 38 breeding bucks were distributed to registered farmers for further genetic improvement in the field. - 75.30% breeding efficiency were observed on basis of does available. - Kidding rate was observed 1.17%. - The overall mortality was 3.61 %. - Preventative health care was carried out by deworming of 4980 animals, ectoparasiticide dipping 4228, ET vaccination 1542 & PPR vaccination of 700 animals was done. - The major diseases observed in the registered animals were enteritis and pneumonia. - 620 animals were sold out of which 512 (82.58%) animals were sold for breeding purpose. | <ul style="list-style-type: none"> - Complete detail of animals sold is not provided. - Number of cluster and distribution of animals in each cluster is not provided. - No information on Training programme conducted. - Genetic parameter analyses need to be carried out. - Details of breeding value of bucks need to be maintained. - Package of practices need to be developed. | <ol style="list-style-type: none"> 1. Selection of clusters & farmers and Registration of adult doe (No. of animals) = 500 per year 2. Animal Identification, pedigree and performance recording (No. of animals) = 1000 per year 3. Selection of male kids and distribution for breeding purpose (No. of animals) = 30 per year 4. Health Coverage with vaccination and deworming etc. (No. of animals) = 2000 per year 5. Capacity building of goat keepers and stake holders (No. of trainings) = 8-10 per year 6. Semen doses cryo-preserved for in situ / ex situ conservation of important breeds (No.) = 1000 per year 7. 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 | |

Sirohi Field Unit

Veterinary Collage, Vallabhnagar



Artificial Insemination in goat by Trans-Cervical Route



Body Height



Semen Collection by A.V.



Farmer Centric Distribution



Farmer Centric Distribution

Surti Field Unit

N.A.U., Navsari, Gujarat



Barbari Buck



Barbari Flock



Visit by Hon'ble DG, ICAR at Barbari Farm



Visit by Director, ICAR-CIRG at Barbari Farm



Multiplier Flock - Barbari



Grazing Flock - Barbari Breed

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

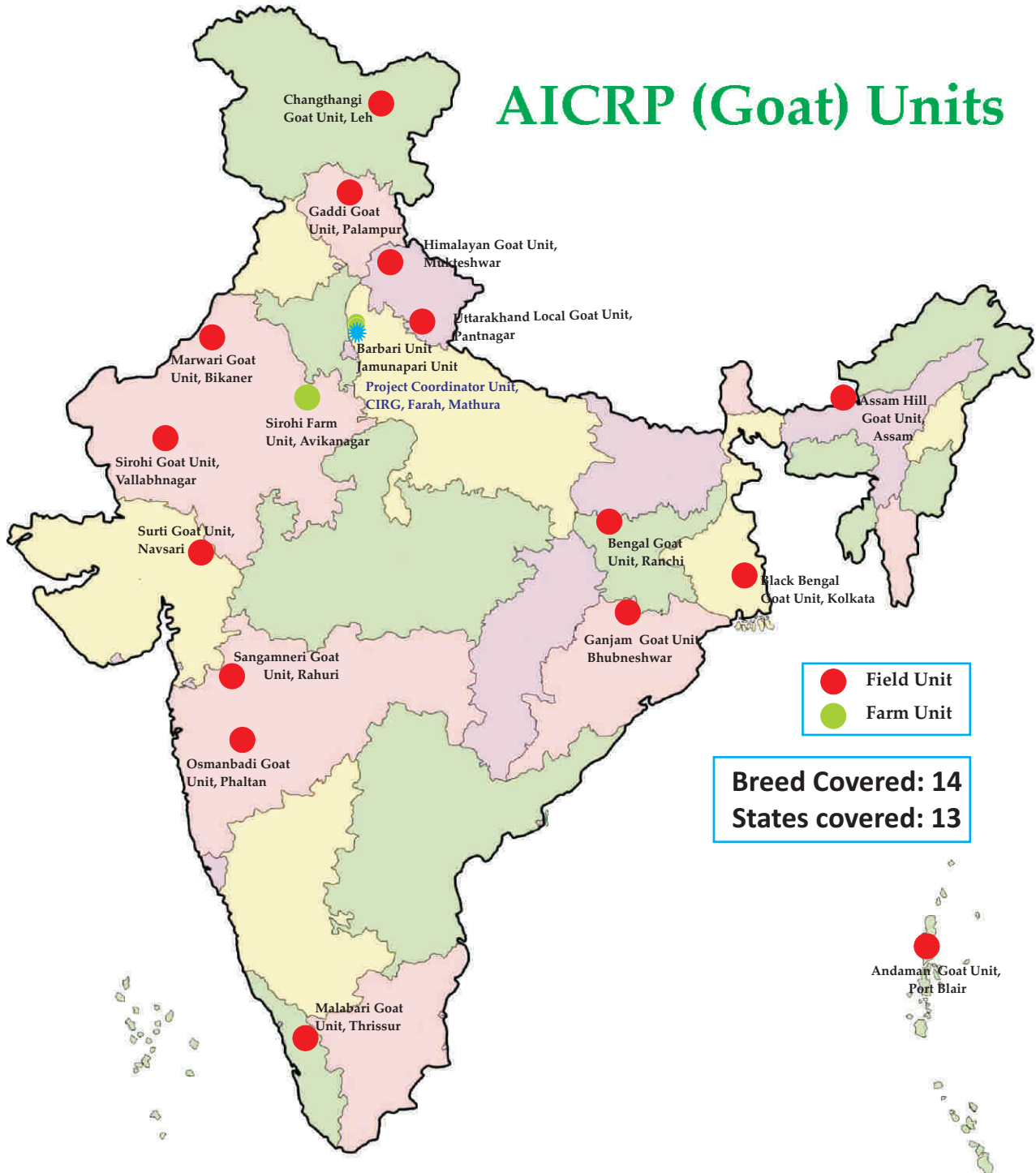
PI - Dr. K. K. Tyagi, Associate Professor (AG&B)

PC'S evaluation : Good

| Activity assigned and targets fixed for each activity during the period | Activity carried out during the period | Gaps / constraints / Shortfalls / excess and reason thereof, if any | Future programme identifying the activities, time line and targets for each of the activity | Remarks |
|--|---|--|--|---------|
| <p>Performance Recording</p> <ul style="list-style-type: none"> - Performance recording of production & reproduction trait in the adopted villages - Distribution of selected buck for genetic improvement. - Data analysis & interpretation - GMIS Data upload <p>Technology developed</p> <ul style="list-style-type: none"> - Demonstration of technologies in the farmer's field <p>Technology transfer</p> <ul style="list-style-type: none"> - Field demonstration/ Health Camp/ Exposure Visit/ Literature Provided/Goshti/ Meeting Conducted <p>Capacity Building</p> <ul style="list-style-type: none"> - Providing skills to farmers for scientific goat farming. <p>Publication</p> <p>Paper/Article/Abstract/ Book/Leaflet pamphlet</p> <ul style="list-style-type: none"> - Linkage created - Other prioritized activities | <ul style="list-style-type: none"> - Overall population growth of 98.46% was recorded with the addition of 564 live kids - The least square means for body weight (2011-2016) at birth, 3, 6, 9 and 12 months of ages was 2.035 ± 0.011 (2671), 8.199 ± 0.046 (1740), 13.138 ± 0.083 (1351), 18.288 ± 0.091 (1111), 21.435 ± 0.168 (500) kg, respectively - Total 46 breeding bucks were provided to goat farmers - Around 10-20 village level goat cooperatives had been started in these tribal villages - One:5 day training program & 4: one day on campus training were organized - Overall mortality was 5.94%. - 2275 animals were dewormed - One success story. | <ul style="list-style-type: none"> - No data uploaded in GMIS. - Genetic parameter analyses need to be carried out. - Breeding value of selected buck need to be maintained & submit to PC Unit. - Cluster-wise & category-wise farmer's details need to be provided. - Buck distribution detail cluster-wise & village-wise need to be provided. | <ul style="list-style-type: none"> - Selection of clusters & farmers and Registration of adult doe (No. of animals) = 500 per year - Animal Identification, pedigree and performance recording (No. of animals) = 1000 per year - Selection of male kids and distribution for breeding purpose (No. of animals) = 30 per year - Health Coverage with vaccination and deworming etc. (No. of animals) = 2000 per year - Capacity building of goat keepers and stake holders (No. of trainings) = 8-10 per year - Semen doses cryo-preserved for in situ / ex situ conservation of important breeds (No.) = 1000 per year - 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 | |

| <p align="center">Name of the Centre - Uttarakhand Goat Field Unit, GBPUA&T, Pantnagar PI - Dr. Brijesh Singh, Professor (AG&B) PC'S evaluation : Good</p> | | | | |
|--|---|--|--|---------|
| Activity assigned and targets fixed for each activity during the period | Activity carried out during the period | Gaps / constraints / Shortfalls / excess and reason thereof, if any | Future programme identifying the activities, time line and targets for each of the activity | Remarks |
| <p>Performance Recording</p> <ul style="list-style-type: none"> - Performance recording of production & reproduction trait in the adopted villages- - Distribution of selected buck for genetic improvement. - Data analysis & interpretation - GMIS Data upload <p>Technology developed</p> <ul style="list-style-type: none"> - Demonstration of technologies in the farmer's field <p>Technology transfer</p> <ul style="list-style-type: none"> - Field demonstration/ Health Camp/ Exposure Visit/ Literature Provided/Goshti/ Meeting Conducted <p>Capacity Building</p> <ul style="list-style-type: none"> - Providing skills to farmers for scientific goat farming. <p>Publication</p> <p>Paper/Article/Abstract/Book/Leaflet pamphlet</p> <ul style="list-style-type: none"> - Linkage created - Other prioritized activities | <ul style="list-style-type: none"> - A total of 1178 kids using 40 bucks and 661 doe have been produced during reporting period - 31 'Pantja' bucks were distributed in the field - The mortality in the total flock was 11.15%. - The kidding rate was 1.53 %. - 39 scrub bucks were castrated - 10 Goat Awareness training programs were organized wherein 516 farmers were trained | <ul style="list-style-type: none"> - Need to submit analyzed baseline data - Recording & performance data, details needs to be provided - Cluster distribution not provided. - No tagging has been done - No farmer centric input provided to farmers - No information regarding mortality - Vaccination details. | <ul style="list-style-type: none"> - Selection of clusters & farmers and Registration of adult doe (No. of animals) = 500 per year - Animal Identification, pedigree and performance recording (No. of animals) = 1000 per year - Selection of male kids and distribution for breeding purpose (No. of animals) = 30 per year - Health Coverage with vaccination and deworming etc. (No. of animals) = 2000 per year - Capacity building of goat keepers and stake holders (No. of trainings) = 8-10 per year - Semen doses cryo-preserved for in situ / ex situ conservation of important breeds (No.) = 1000 per year - 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 | |

AICRP (Goat) Units



Distribution of 18 AICRP (G) Center all over India covering 14 Goat breeds among 13 states

3.0 Goat Production Management Information System

1. Andaman Goat Field Unit

| | 24 Apr 2017 | 18 Feb 2017 | 27 Dec 2016 | 24 Nov 2016 | 30 Oct 2016 |
|--|--|--|--------------|--------------|--------------|
| Inventory | 2641 | 2641 | 2641 | 2641 | 2641 |
| Growth | 2227 | 2227 | 15 | 15 | 15 |
| Milk Yield | 7 | 7 | 0 | 0 | 0 |
| Female Reproduction | 292 | 292 | 1 | 1 | 1 |
| Male Reproduction | 0 | 0 | 0 | 0 | 0 |
| Health Mgmt. | 0 | 0 | 0 | 0 | 0 |
| Mortality | 68 | 68 | 7 | 7 | 7 |
| Physiological Report | 15 | 15 | 2 | 2 | 2 |
| Buck/Doe Distribution | 21 | 21 | 17 | 17 | 17 |
| GIS | Filled | Filled | Filled | Filled | Filled |
| Staff Details | 10 | 10 | 10 | 10 | 10 |
| Fund Utilization, Income Generation | Filled | Filled | Filled (Jun) | Filled (Jun) | Filled (Jun) |
| Training | 11 | 11 | 11 | 11 | 10 |
| Farm / Field Visit | 24 | 24 | 0 | 0 | 0 |
| Exposer Visit | 1 | 1 | 0 | 0 | 0 |
| Awareness Camp | 5 | 5 | 0 | 0 | 0 |
| Registered Farmers | 198 | 198 | 198 | 198 | 2 |
| Cluster / Village | 2/26 | 2/26 | 0 | 0 | 0 |
| PDF (Leaflet, Monogram, Success Story etc.) | 8 Scientific Publication (1), Leaflet / Pamphlet (3), Success Story (4) | 8 Scientific Publication (1), Leaflet / Pamphlet (3), Success Story (4) | 0 | 0 | 0 |

2. Assam Goat Field Unit

| | 24 Apr 2017 | 18 Feb 2017 | 27 Dec 2016 | 24 Nov 2016 | 30 Oct 2016 |
|--|-------------|-------------|-------------|-------------|-------------|
| Inventory | 3860 | 3753 | 3646 | 2781 | 640 |
| Growth | 3854 | 3732 | 3636 | 1931 | 3273 |
| Milk Yield | 210 | 210 | 142 | 0 | 0 |
| Female Reproduction | 1551 | 1480 | 1269 | 563 | 790 |
| Male Reproduction | 193 | 193 | 0 | 0 | 0 |
| Health Mgmt. | 122 | 122 | 77 | 70 | 165 |
| Mortality | 431 | 419 | 395 | 109 | 436 |
| Physiological Report | 282 | 282 | 282 | 182 | 282 |
| Buck/Doe Distribution | 10 | 10 | 10 | 4 | 4 |
| GIS | 4 | 4 | Nil | Blank | Nil |
| Staff Details | 4 | 4 | 1 | 1 | 1 |
| Fund Utilization, Income Generation | Nil | Nil | Nil | Blank | Nil |
| Training | 12 | 12 | 8 | 2 | 2 |
| Farm / Field Visit | 155 | 155 | 0 | 0 | 0 |
| Exposer Visit | 0 | 0 | 0 | 0 | 0 |
| Awareness Camp | 0 | 0 | 0 | 0 | 0 |

| | | | | | |
|---|--|--|--|--|---|
| Registered Farmers | 233 | 233 | 233 | 233 | 0 |
| Cluster / Village | 1/4 | 1/4 | 0 | 0 | 0 |
| PDF (Leaflet, Monogram, Success Story etc.) | 10 Leaflet / Pamphlet (3), Success Stories (7) | 10 Leaflet / Pamphlet (3), Success Stories (7) | 10 Leaflet / Pamphlet (3), Success Stories (7) | 10 Leaflet / Pamphlet (3), Success Stories (7) | 5 |

3. Black Bengal Goat Field Unit, Kolkata

| | 24 Apr 2017 | 18 Feb 2017 | 27 Dec 2016 | 24 Nov 2016 | 30 Oct 2016 |
|---|--------------------------|--------------------------|--------------------------|-------------|-------------|
| Inventory | 4090 | 4022 | 3898 | 3472 | 3472 |
| Growth | 2780 | 2710 | 2209 | 2075 | 1942 |
| Milk Yield | 12947 | 9767 | 5877 | 5877 | 5880 |
| Female Reproduction | 18744 | 18697 | 18484 | 17049 | 6493 |
| Male Reproduction | 18797 | 18727 | 18272 | 14117 | 0 |
| Health Mgmt. | 408 | 369 | 273 | 273 | Filled |
| Mortality | 1244 | 1224 | 1145 | 1103 | 1103 |
| Physiological Report | 1524 | 724 | 724 | 724 | 724 |
| Buck/Doe Distribution | 63 | 63 | 63 | 63 | 63 |
| GIS | 4 | Filled | Filled | Filled | Filled |
| Staff Details | 6 | 6 | 6 | 6 | Filled |
| Fund Utilization, Income Generation | Filled (Incorrect) | Filled (Incorrect) | Filled | Filled | Filled |
| Training | 12 | 12 | 6 | 8 | 6 |
| Farm / Field Visit | 91 | 91 | 21 | 21 | 3 |
| Exposer Visit | 0 | 0 | 0 | 0 | 0 |
| Awareness Camp | 135 | 135 | 11 | 11 | Filled |
| Registered Farmers | 976 | 976 | 976 | 976 | 488 |
| Cluster / Village | 4/10 | 4/10 | 4/10 | 4/10 | Filled |
| PDF (Leaflet, Monogram, Success Story etc.) | 1 Leaflet / Pamphlet (1) | 1 Leaflet / Pamphlet (1) | 1 Leaflet / Pamphlet (1) | 0 | Nil |

4. Black Bengal Goat Field Unit, Ranchi

| | 24 Apr 2017 | 18 Feb 2017 | 27 Dec 2016 | 24 Nov 2016 | 30 Oct 2016 |
|-------------------------------------|--------------------|--------------------|-------------|-------------|-------------|
| Inventory | 232 | 232 | 0 | 0 | 0 |
| Growth | 651 | 651 | 597 | 597 | 597 |
| Milk Yield | 108 | 108 | 0 | 0 | 0 |
| Female Reproduction | 92 | 2 | 0 | 0 | 0 |
| Male Reproduction | 84 | 49 | 0 | 0 | 0 |
| Health Mgmt. | 0 | 0 | 0 | 0 | 0 |
| Mortality | 32 | 32 | 0 | 0 | 0 |
| Physiological Report | 110 | 110 | 110 | 110 | 110 |
| Buck/Doe Distribution | 114 | 114 | 114 | 114 | 114 |
| GIS | 4 | Filled | Blank | Blank | Nil |
| Staff Details | 6 | 5 | 2 | 2 | Filled |
| Fund Utilization, Income Generation | Filled (Incorrect) | Filled (Incorrect) | Blank | Blank | Nil |
| Training | 2 | 2 | 2 | 2 | 6 |
| Farm / Field Visit | 0 | 0 | 0 | 0 | 0 |
| Exposer Visit | 0 | 0 | 0 | 0 | 0 |

| | | | | | |
|--|---|---|---|---|-----|
| Awareness Camp | 0 | 0 | 0 | 0 | 0 |
| Registered Farmers | 384 | 384 | 384 | 384 | 384 |
| Cluster / Village | 2/2 | 2/2 | 0 | 0 | Nil |
| PDF (Leaflet, Monogram, Success Story etc.) | 4 Leaflet / Pamphlet (2), Success Stories (2) | 4 Leaflet / Pamphlet (2), Success Stories (2) | 4 Leaflet / Pamphlet (2), Success Stories (2) | 4 Leaflet / Pamphlet (2), Success Stories (2) | Nil |

5. Changthangi Goat Field Unit

| | 24 Apr 2017 | 18 Feb 2017 | 27 Dec 2016 | 24 Nov 2016 | 30 Oct 2016 |
|--|-------------|-------------|-------------|-------------|-------------|
| Inventory | 0 | 0 | 0 | 0 | 0 |
| Growth | 0 | 0 | 0 | 0 | 0 |
| Milk Yield | 0 | 0 | 0 | 0 | 0 |
| Female Reproduction | 0 | 0 | 0 | 0 | 0 |
| Male Reproduction | 0 | 0 | 0 | 0 | 0 |
| Health Mgmt. | 0 | 0 | 0 | 0 | 0 |
| Mortality | 0 | 0 | 0 | 0 | 0 |
| Physiological Report | 0 | 0 | 0 | 0 | 0 |
| Buck/Doe Distribution | 0 | 0 | 0 | 0 | 0 |
| GIS | Blank | Blank | Blank | Blank | Nil |
| Staff Details | 6 | 6 | 6 | 6 | Filled 6 |
| Fund Utilization, Income Generation | Blank | Blank | Blank | Blank | Nil |
| Training | 0 | 0 | 0 | 0 | 0 |
| Farm / Field Visit | 0 | 0 | 0 | 0 | 0 |
| Exposer Visit | 0 | 0 | 0 | 0 | 0 |
| Awareness Camp | 0 | 0 | 0 | 0 | 0 |
| Registered Farmers | 0 | 0 | 0 | 0 | 0 |
| Cluster / Village | 3/5 | 3/5 | 3/5 | 3/5 | Nil |
| PDF (Leaflet, Monogram, Success Story etc.) | 0 | 0 | 0 | 0 | Nil |

6. Gaddi Goat Field Unit

| | 24 Apr 2017 | 18 Feb 2017 | 27 Dec 2016 | 24 Nov 2016 | 30 Oct 2016 |
|--|-------------|-------------|-------------|-------------|-------------|
| Inventory | 98 | 98 | 98 | 98 | 98 |
| Growth | 398 | 398 | 398 | 398 | 398 |
| Milk Yield | 501 | 501 | 501 | 501 | 501 |
| Female Reproduction | 400 | 400 | 400 | 400 | 400 |
| Male Reproduction | 0 | 0 | 0 | 0 | 0 |
| Health Mgmt. | 0 | 0 | 0 | 0 | 0 |
| Mortality | 70 | 70 | 70 | 70 | 70 |
| Physiological Report | 0 | 0 | 0 | 0 | 0 |
| Buck/Doe Distribution | 84 | 84 | 84 | 84 | 84 |
| GIS | Blank | Blank | Blank | Blank | Nil |
| Staff Details | 12 | 12 | 12 | 12 | 12 |
| Fund Utilization, Income Generation | Blank | Blank | Blank | Blank | Nil |
| Training | 0 | 0 | 0 | 0 | 0 |
| Farm / Field Visit | 0 | 0 | 0 | 0 | 0 |

| | | | | | |
|--|---|---|---|---|---|
| Exposer Visit | 0 | 0 | 0 | 0 | 0 |
| Awareness Camp | 0 | 0 | 0 | 0 | 0 |
| Registered Farmers | 384 | 384 | 384 | 384 | 384 |
| Cluster / Village | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 |
| PDF (Leaflet, Monogram, Success Story etc.) | 3 Leaflet / Pamphlet (2), Success Stories (1) | 3 Leaflet / Pamphlet (2), Success Stories (1) | 3 Leaflet / Pamphlet (2), Success Stories (1) | 3 Leaflet / Pamphlet (2), Success Stories (1) | 3 Leaflet / Pamphlet (2), Success Stories (1) |

7. Ganjam Goat Field Unit

| | 24 Apr 2017 | 18 Feb 2017 | 27 Dec 2016 | 24 Nov 2016 | 30 Oct 2016 |
|--|--------------------|--------------------|--------------------|--------------------|--------------------|
| Inventory | 321 | 321 | 321 | 321 | 321 |
| Growth | 119 | 119 | 0 | 0 | 0 |
| Milk Yield | 197 | 197 | 0 | 0 | 0 |
| Female Reproduction | 0 | 0 | 0 | 0 | 0 |
| Male Reproduction | 0 | 0 | 0 | 0 | 0 |
| Health Mgmt. | 0 | 0 | 0 | 0 | 0 |
| Mortality | 0 | 0 | 0 | 0 | 0 |
| Physiological Report | 0 | 0 | 0 | 0 | 0 |
| Buck/Doe Distribution | 55 | 55 | 55 | 55 | 55 |
| GIS | Filled | Filled | Blank | Blank | Nil |
| Staff Details | 9 | 9 | 9 | 9 | 9 |
| Fund Utilization, Income Generation | Filled (Incorrect) | Filled (Incorrect) | Blank | Blank | Nil |
| Training | 2 | 2 | 2 | 2 | 2 |
| Farm / Field Visit | 1 | 1 | 1 | 1 | 1 |
| Exposer Visit | 0 | 0 | 0 | 0 | 0 |
| Awareness Camp | 0 | 0 | 0 | 0 | 0 |
| Registered Farmers | 78 | 78 | 78 | 78 | 78 |
| Cluster / Village | Filled (Incorrect) | Filled (Incorrect) | Filled (Incorrect) | Filled (Incorrect) | Wrongly Filled |
| PDF (Leaflet, Monogram, Success Story etc.) | 0 | 0 | 0 | 0 | 0 |

8. Himalayan Local Goat Field Unit

| | 24 Apr 2017 | 18 Feb 2017 | 27 Dec 2016 | 24 Nov 2016 | 30 Oct 2016 |
|--|-------------|-------------|-------------|-------------|-------------|
| Inventory | 312 | 312 | 312 | 312 | 312 |
| Growth | 318 | 302 | 302 | 302 | 302 |
| Milk Yield | 0 | 0 | 0 | 0 | 0 |
| Female Reproduction | 0 | 0 | 0 | 0 | 0 |
| Male Reproduction | 0 | 0 | 0 | 0 | 0 |
| Health Mgmt. | 0 | 0 | 0 | 0 | 0 |
| Mortality | 7 | 7 | 7 | 7 | 7 |
| Physiological Report | 0 | 0 | 0 | 0 | Nil |
| Buck/Doe Distribution | 0 | 0 | 0 | 0 | 0 |
| GIS | Blank | Blank | Blank | Blank | Filled |
| Staff Details | 5 | 5 | 5 | 5 | Filled |
| Fund Utilization, Income Generation | Blank | Blank | Blank | Blank | Nil |
| Training | 0 | 0 | 0 | 0 | 0 |
| Farm / Field Visit | 2 | 2 | 2 | 2 | 1 |
| Exposer Visit | 1 | 1 | 1 | 1 | 0 |
| Awareness Camp | 0 | 0 | 0 | 0 | 0 |
| Registered Farmers | 6 | 6 | 6 | 6 | 6 |
| Cluster / Village | 0 | 0 | 0 | 0 | Nil |
| PDF (Leaflet, Monogram, Success Story etc.) | 0 | 0 | 0 | 0 | Nil |

9. Marwari Goat Field Unit

| | 24 Apr 2017 | 18 Feb 2017 | 27 Dec 2016 | 24 Nov 2016 | 30 Oct 2016 |
|--|--|--|-----------------------------|------------------------------|---------------------|
| Inventory | 1663 | 1663 | 1663 | 1663 | 1663 |
| Growth | 1873 | 1873 | 1873 | 1873 | 1873 |
| Milk Yield | 557 | 557 | 557 | 557 | 557 |
| Female Reproduction | 3752 | 3752 | 3752 | 3752 | 3752 |
| Male Reproduction | 0 | 0 | 0 | 0 | 0 |
| Health Mgmt. | 7 | 7 | 0 | 0 | 0 |
| Mortality | 97 | 97 | 0 | 0 | 0 |
| Physiological Report | 592 | 592 | 0 | 0 | 0 |
| Buck/Doe Distribution | 96 | 96 | 76 | 76 | 76 |
| GIS | Filled | Filled | Filled | Filled | Filled |
| Staff Details | 7 | 7 | 7 | 7 | 7 |
| Fund Utilization, Income Generation | Filled (Incorrect) | Filled (Incorrect) | Blank | Blank | Nil |
| Training | 9 | 9 | 9 | 9 | 8 |
| Farm / Field Visit | 121 | 121 | 96 | 96 | 96 |
| Exposer Visit | 0 | 0 | 0 | 0 | 0 |
| Awareness Camp | 10 | 10 | 0 | 0 | 0 |
| Registered Farmers | 62 | 62 | 57 | 57 | 55 |
| Cluster / Village | 6/16 | 6/16 | 6/16 | 6/16 | Filled |
| PDF (Leaflet, Monogram, Success Story etc.) | 13 Leaflet / Pamphlet (4), Scientific Publication (8), Success Story (1) | 13 Leaflet / Pamphlet (4), Scientific Publication (8), Success Story (1) | 4 Leaflet / Pamphlet (4) | 43 Leaflet / Pamphlet (4) | Filled (Leaflet) |

10. Malabari Goat Field Unit

| | 24 Apr 2017 | 18 Feb 2017 | 27 Dec 2016 | 24 Nov 2016 | 30 Oct 2016 |
|--|--|--|--|---|---|
| Inventory | 1623 | 1556 | 1556 | 1556 | 1556 |
| Growth | 1167 | 643 | 508 | 507 | 195 |
| Milk Yield | 85 | 74 | 74 | 74 | 74 |
| Female Reproduction | 522 | 522 | 521 | 521 | 521 |
| Male Reproduction | 16 | 16 | 0 | 0 | 0 |
| Health Mgmt. | 32 | 32 | 0 | 0 | 0 |
| Mortality | 14 | 3 | 3 | 3 | 3 |
| Physiological Report | 144 | 144 | 144 | 143 | 119 |
| Buck/Doe Distribution | 87 | 87 | 87 | 87 | 16 |
| GIS | Filled | Filled | 0 | Blank | Nil |
| Staff Details | 4 | 4 | 4 | 4 | Filled |
| Fund Utilization, Income Generation | Filled | Filled | Filled | Filled | Nil |
| Training | 18 | 18 | 17 | 16 | 13 |
| Farm / Field Visit | 65 | 65 | 65 | 62 | 4 |
| Exposer Visit | 8 | 8 | 8 | 8 | 0 |
| Awareness Camp | 15 | 15 | 15 | 15 | 0 |
| Registered Farmers | 327 | 327 | 90 | 63 | 64 |
| Cluster / Village | 6/18 | 6/18 | 0 | 0 | Nil |
| PDF (Leaflet, Monogram, Success Story etc.) | 45 Scientific Publication (20), Technology Development (2), Leaflet / Pamphlet (16), Monogram (1), Success Stories (4), Package of Practices (1) | 32 Scientific Publication (12), Technology Development (2), Leaflet / Pamphlet (12), Monogram (1), Success Stories (4), Package of Practices (1) | 30 Scientific Publication (12), Technology Development (1), Leaflet / Pamphlet (12), Success Stories (4), Package of Practices (1) | 19 Scientific Publication (12), Technology Development (1), Leaflet / Pamphlet (1), Success Stories (4), Package of Practices (1) | 15 Scientific Publication (11), Technology Development (2), Leaflet (1), Success Stories (1), Package of Practices (1) Impact of Technology (1) |

11. Osmanabadi Goat Field Unit

| | 24 Apr 2017 | 18 Feb 2017 | 27 Dec 2016 | 24 Nov 2016 | 30 Oct 2016 |
|--|---|---|---|---|-------------|
| Inventory | 12287 | 12287 | 12287 | 12287 | 0 |
| Growth | 7938 | 7938 | 0 | 0 | 0 |
| Milk Yield | 1900 | 1900 | 1900 | 1900 | 0 |
| Female Reproduction | 768 | 768 | 768 | 768 | 768 |
| Male Reproduction | 668 | 668 | 668 | 668 | 0 |
| Health Mgmt. | 0 | 0 | 0 | 0 | 0 |
| Mortality | 768 | 768 | 768 | 768 | 768 |
| Physiological Report | 87 | 87 | 87 | 87 | 87 |
| Buck/Doe Distribution | 60 | 60 | 60 | 60 | 58 |
| GIS | Filled | Filled | Filled | Filled | Nil |
| Staff Details | 9 | 9 | 9 | 9 | Nil |
| Fund Utilization, Income Generation | Filled | Filled | Filled | Filled | Nil |
| Training | 12 | 12 | 10 | 10 | 9 |
| Farm / Field Visit | 1422 | 1422 | 1422 | 1422 | 0 |
| Exposer Visit | 9 | 9 | 7 | 7 | 0 |
| Awareness Camp | 8 | 8 | 0 | 0 | 0 |
| Registered Farmers | 613 | 613 | 613 | 613 | 604 |
| Cluster / Village | 5/10 | 5/10 | 5/10 | 5/10 | Nil |
| PDF (Leaflet, Monogram, Success Story etc.) | 28 Scientific Publication (6), Technology Development (1), Leaflet / Pamphlet (6), Success Stories (3), Package of Practices (3) Impact of Technology (1) | 28 Scientific Publication (6), Technology Development (1), Leaflet / Pamphlet (6), Success Stories (3), Package of Practices (3) Impact of Technology (1) | 28 Scientific Publication (6), Technology Development (1), Leaflet / Pamphlet (6), Success Stories (3), Package of Practices (3) Impact of Technology (1) | 28 Scientific Publication (6), Technology Development (1), Leaflet / Pamphlet (6), Success Stories (3), Package of Practices (3) Impact of Technology (1) | Nil |

12. Sirohi Farm Unit, Avikanagar

| | 24 Apr 2017 | 18 Feb 2017 | 27 Dec 2016 | 24 Nov 2016 | 30 Oct 2016 |
|--|-------------|-------------|-------------|-------------|-------------|
| Inventory | 6751 | 6751 | 6751 | 6751 | 6751 |
| Growth | 318 | 318 | 318 | 318 | 318 |
| Milk Yield | 157 | 157 | 157 | 157 | 157 |
| Female Reproduction | 2906 | 2906 | 2906 | 2906 | 2906 |
| Male Reproduction | 0 | 0 | 0 | 0 | 0 |
| Health Mgmt. | 0 | 0 | 0 | 0 | 0 |
| Mortality | 40 | 40 | 40 | 40 | 40 |
| Physiological Report | 0 | 0 | 0 | 0 | 0 |
| Buck/Doe Distribution | 7 | 7 | 6 | 6 | 6 |
| GIS | Blank | Blank | Blank | Blank | Nil |
| Staff Details | 0 | 0 | 0 | 0 | Nil |
| Fund Utilization, Income Generation | Filled | Filled | Filled | Filled | Filled |
| Training | 1 | 1 | 1 | 1 | 1 |
| Farm / Field Visit | 0 | 0 | 0 | 0 | 0 |
| Exposer Visit | 0 | 0 | 0 | 0 | 0 |
| Awareness Camp | 0 | 0 | 0 | 0 | 0 |
| Registered Farmers | 7 | 7 | 0 | 0 | 0 |
| Cluster / Village | 0 | 0 | 0 | 0 | Nil |
| PDF (Leaflet, Monogram, Success Story etc.) | 0 | 0 | 0 | 0 | Nil |

13. Sirohi Goat Field Unit

| | 24 Apr 2017 | 18 Feb 2017 | 27 Dec 2016 | 24 Nov 2016 | 30 Oct 2016 |
|--|-----------------------|-----------------------|-------------|-------------|-------------|
| Inventory | 1199 | 1007 | 0 | 0 | 0 |
| Growth | 787 | 595 | 0 | 0 | 0 |
| Milk Yield | 7 | 7 | 0 | 0 | 0 |
| Female Reproduction | 2 | 2 | 0 | 0 | 0 |
| Male Reproduction | 0 | 0 | 0 | 0 | 0 |
| Health Mgmt. | 0 | 0 | 0 | 0 | 0 |
| Mortality | 1 | 1 | 0 | 0 | 0 |
| Physiological Report | 0 | 0 | 0 | 0 | 0 |
| Buck/Doe Distribution | 28 | 28 | 0 | 0 | 0 |
| GIS | Blank | Blank | Blank | Blank | Nil |
| Staff Details | 1 | 1 | 0 | 0 | Nil |
| Fund Utilization, Income Generation | Filled (Incorrect) | Filled (Incorrect) | Blank | Blank | Nil |
| Training | 0 | 0 | 0 | 0 | 0 |
| Farm / Field Visit | 0 | 0 | 0 | 0 | 0 |
| Exposer Visit | 4 | 4 | 0 | 0 | 0 |
| Awareness Camp | 0 | 0 | 0 | 0 | 0 |
| Registered Farmers | 39 | 39 | 0 | 0 | 0 |
| Cluster / Village | 0 | 0 | 0 | 0 | Nil |
| PDF (Leaflet, Monogram, Success Story etc.) | 0 | 0 | 0 | 0 | Nil |

14. Sangamneri Goat Field Unit

| | 24 Apr 2017 | 18 Feb 2017 | 27 Dec 2016 | 24 Nov 2016 | 30 Oct 2016 |
|--|-------------|-------------|-------------|-------------|-------------|
| Inventory | 0 | 0 | 0 | 0 | 0 |
| Growth | 742 | 742 | 742 | 22 | 11 |
| Milk Yield | 0 | 0 | 0 | 0 | 0 |
| Female Reproduction | 0 | 0 | 0 | 0 | 0 |
| Male Reproduction | 0 | 0 | 0 | 0 | 0 |
| Health Mgmt. | 0 | 0 | 0 | 0 | 0 |
| Mortality | 0 | 0 | 0 | 0 | 0 |
| Physiological Report | 0 | 0 | 0 | 0 | 0 |
| Buck/Doe Distribution | 90 | 90 | 90 | 90 | 90 |
| GIS | Blank | Blank | Blank | Blank | Nil |
| Staff Details | 6 | 6 | 6 | 6 | Nil |
| Fund Utilization, Income Generation | Blank | Blank | Blank | Blank | Nil |
| Training | 4 | 4 | 1 | 1 | 0 |
| Farm / Field Visit | 0 | 0 | 0 | 0 | 0 |
| Exposer Visit | 0 | 0 | 0 | 0 | 0 |
| Awareness Camp | 0 | 0 | 0 | 0 | 0 |
| Registered Farmers | 0 | 0 | 0 | 0 | 0 |
| Cluster / Village | 0 | 0 | 0 | 0 | Nil |
| PDF (Leaflet, Monogram, Success Story etc.) | 0 | 0 | 0 | 0 | Nil |

15. Surti Goat Field Unit

| | 24 Apr 2017 | 18 Feb 2017 | 27 Dec 2016 | 24 Nov 2016 | 30 Oct 2016 |
|--|-------------|-------------|-------------|-------------|-------------|
| Inventory | 440 | 453 | 453 | 453 | 453 |
| Growth | 0 | 0 | 0 | 0 | 0 |
| Milk Yield | 0 | 0 | 0 | 0 | 0 |
| Female Reproduction | 0 | 0 | 0 | 0 | 0 |
| Male Reproduction | 0 | 0 | 0 | 0 | 0 |
| Health Mgmt. | 0 | 0 | 0 | 0 | 0 |
| Mortality | 13 | 13 | 13 | 13 | 13 |
| Physiological Report | 0 | 0 | 0 | 0 | 0 |
| Buck/Doe Distribution | 0 | 0 | 0 | 0 | 0 |
| GIS | Blank | Blank | Blank | Blank | Nil |
| Staff Details | 0 | 0 | 0 | 0 | Nil |
| Fund Utilization, Income Generation | Blank | Blank | Blank | Blank | Nil |
| Training | 0 | 0 | 0 | 0 | 0 |
| Farm / Field Visit | 0 | 0 | 0 | 0 | 0 |
| Exposer Visit | 0 | 0 | 0 | 0 | 0 |
| Awareness Camp | 0 | 0 | 0 | 0 | 0 |
| Registered Farmers | 0 | 0 | 0 | 0 | 0 |
| Cluster / Village | 0 | 0 | 0 | 0 | Nil |
| PDF (Leaflet, Monogram, Success Story etc.) | 0 | 0 | 0 | 0 | Nil |

16. Uttarakhand Goat Field Unit

| | 24 Apr 2017 | 18 Feb 2017 | 27 Dec 2016 | 24 Nov 2016 | 30 Oct 2016 |
|--|---|---|-------------|-------------|-------------|
| Inventory | 1228 | 1228 | 1196 | 1196 | 0 |
| Growth | 1197 | 1196 | 1196 | 1196 | 0 |
| Milk Yield | 0 | 0 | 0 | 0 | 0 |
| Female Reproduction | 21 | 0 | 0 | 0 | 0 |
| Male Reproduction | 0 | 0 | 0 | 0 | 0 |
| Health Mgmt. | 0 | 0 | 0 | 0 | 0 |
| Mortality | 328 | 328 | 328 | 328 | 0 |
| Physiological Report | 0 | 0 | 0 | 0 | Nil |
| Buck/Doe Distribution | 61 | 61 | 41 | 41 | 0 |
| GIS | Filled | Filled | Filled | Filled | Nil |
| Staff Details | 8 | 8 | 0 | 0 | Nil |
| Fund Utilization, Income Generation | Blank | Blank | Blank | Blank | Nil |
| Training | 12 | 12 | 4 | 4 | 4 |
| Farm / Field Visit | 10 | 10 | 0 | 0 | 0 |
| Exposer Visit | 0 | 0 | 0 | 0 | 0 |
| Awareness Camp | 0 | 0 | 0 | 0 | 0 |
| Registered Farmers | 129 | 129 | 110 | 110 | 0 |
| Cluster / Village | 4/23 | 4/23 | 4/23 | 0 | Nil |
| PDF (Leaflet, Monogram, Success Story etc.) | 2 Scientific Publication (1), Leaflet / Pamphlet (1) | 2 Scientific Publication (1), Leaflet / Pamphlet (1) | 0 | 0 | Nil |

4.0 Financial/Administrative Performance of AICRP on Goat Improvement 2016-17

4.1 Budget Allocation and Fund Provisions

For the financial year 2016-17, a total of ₹ 364.00 lakhs was allocated as RE by ICAR New Delhi.

Table 7 : Comprehensive Head wise RE for the financial year 2016-17

| S.No. | Head / Sub-Head | Other than NEH | NEH | TSP | Total |
|-------|--|----------------|-------------|--------------|---------------|
| | CAPITAL | | | | |
| 1 | Works | 0.00 | 0.00 | 0.00 | 0.00 |
| A. | Land | 0.00 | 0.00 | 0.00 | 0.00 |
| B. | Building | 0.00 | 0.00 | 0.00 | 0.00 |
| (i) | Office building (Goat Sheds etc) | 0.00 | 0.00 | 0.00 | 0.00 |
| (ii) | Residential building | 0.00 | 0.00 | 0.00 | 0.00 |
| (iii) | Minor works | 12.00 | 0.00 | 0.00 | 12.00 |
| 2 | Equipments (Livestock Related) | 6.00 | 0.00 | 0.00 | 6.00 |
| 3 | Information Technology | 0.00 | 0.00 | 0.00 | 0.00 |
| 4 | Library books & Journals | 0.00 | 0.00 | 0.00 | 0.00 |
| 5 | Vehicles & Vessels | 0.00 | 0.00 | 0.00 | 0.00 |
| 6 | Livestock | 0.00 | 0.00 | 0.00 | 0.00 |
| 7 | Furniture & Fixtures | 0.00 | 0.00 | 0.00 | 0.00 |
| 8 | Others | 0.00 | 0.00 | 14.00 | 14.00 |
| | REVENUE | 18.00 | 0.00 | 14.00 | 32.00 |
| 1 | Establishment Expenses | | | | |
| A. | Salaries | 0.00 | 0.00 | 0.00 | 0.00 |
| (i) | Establishment Charges | 59.00 | 0.00 | 0.00 | 59.00 |
| (ii) | Wages | 0.00 | 0.00 | 0.00 | 0.00 |
| (iii) | Overtime allowances | 0.00 | 0.00 | 0.00 | 0.00 |
| B. | Pension & other retirement benefits | 0.00 | 0.00 | 0.00 | 0.00 |
| C. | Loans & advances | 0.00 | 0.00 | 0.00 | 0.00 |
| 2 | Traveling allowances | | | | |
| A. | Domestic TA/ Transfer TA | 15.00 | 0.00 | 0.00 | 15.00 |
| B. | Foreign TA | 0.00 | 0.00 | 0.00 | 0.00 |
| 3 | Research & Operational Expenses | 0.00 | 0.00 | 0.00 | 0.00 |
| A. | Research expenses | 100.00 | 0.00 | 0.00 | 100.00 |
| B. | Operational expenses (Salary of RA/SRF/Contractual Staff) | 121.00 | 30.00 | 7.00 | 158.00 |
| 4 | Administrative expenses | 0.00 | 0.00 | 0.00 | 0.00 |
| A. | Infrastructure | 0.00 | 0.00 | 0.00 | 0.00 |
| B. | Communication | 0.00 | 0.00 | 0.00 | 0.00 |
| C. | Repairs & Maintenance | 0.00 | 0.00 | 0.00 | 0.00 |
| (i) | Equipments, Vehicles & others | 0.00 | 0.00 | 0.00 | 0.00 |
| (ii) | Office Building | 0.00 | 0.00 | 0.00 | 0.00 |

| | | | | | |
|---|---|---------------|--------------|--------------|---------------|
| (iii) | Residential building | 0.00 | 0.00 | 0.00 | 0.00 |
| (iv) | Minor works | 0.00 | 0.00 | 0.00 | 0.00 |
| D. | Other (excluding TA) | 0.00 | 0.00 | 0.00 | 0.00 |
| 5 | Miscellaneous expenses | 0.00 | 0.00 | 0.00 | 0.00 |
| A. | HRD | 0.00 | 0.00 | 0.00 | 0.00 |
| B. | Other items (Capacity Building of farmers etc.) | 0.00 | 0.00 | 0.00 | 0.00 |
| C. | Publicity & Exhibitions | 0.00 | 0.00 | 0.00 | 0.00 |
| D. | Guest House - Maintenance | 0.00 | 0.00 | 0.00 | 0.00 |
| E. | Other miscellaneous | 0.00 | 0.00 | 0.00 | 0.00 |
| Total - Miscellaneous Expenses | | 0.00 | 0.00 | 0.00 | 0.00 |
| Total Grants in Aid - General | | 236.00 | 30.00 | 7.00 | 273.00 |
| Total Revenue (Grants in Aid-Salaries + Grant in Aid-General) | | 313.00 | 30.00 | 21.00 | 364.00 |

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

| Head | | 2012-13 (Actual) | 2013-14 (Actual) | 2014-15 (Actual) | 2015-16 (Actual) | 2016-17 (R.E.) |
|--------------------------|-------------------------------------|---------------------|---------------------|---------------------|---------------------|-------------------|
| A | CAPITAL | 0.00 | 5.00 | 5.00 | 35.00 | 0.00 |
| 1 | Works | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| A. | Land | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| B. | Building | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| (i) | Office building | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| (ii) | Residential building | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| (iii) | Minor works | 0.00 | 5.00 | 0.00 | 0.00 | 12.00 |
| 2 | Equipment | 0.00 | 3.00 | 17.00 | 15.00 | 6.00 |
| 3 | Information Technology | 0.00 | 0.00 | 0.00 | 12.50 | 0.00 |
| 4 | Library books & Journals | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5 | Vehicles | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6 | Livestock | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7 | Furniture & Fixtures | 0.00 | 2.00 | 4.00 | 1.00 | 1.00 |
| 8 | Others (Specify) | 0.00 | 0.00 | 0.00 | 0.00 | 14.00 |
| Total Capital (A) | | 0.00 | 10.00 | 26.00 | 63.50 | 32.00 |
| B | REVENUE | | | | | |
| 1 | Establish, expenses Salaries | 139.33 | 155.00 | 103.00 | 84.00 | 59.00 |
| (i) | Establish, Charges - Regular | 139.33 | 155.00 | 0.00 | 0.00 | 59.00 |
| (ii) | Establish, Charges - Arrears | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2 | Traveling Allowances | 10.52 | 21.00 | 16.00 | 20.75 | 15.00 |
| a) | Domestic T.A. | 10.52 | 21.00 | 16.00 | 20.75 | 15.00 |
| b) | Foreign T.A. | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

| | | | | | | |
|--------------------------|--|---------------|---------------|---------------|---------------|---------------|
| 3 | Research & Operational Expenses | 124.65 | 160.00 | 186.00 | 275.65 | 258.00 |
| a) | Research | 124.65 | 90.00 | 0.00 | 95.65 | 100.00 |
| b) | Operational | 0.00 | 70.00 | 0.00 | 180.00 | 158.00 |
| 4 | Administrative Expenses | 0.00 | 0.00 | 0.00 | 4.00 | 0.00 |
| a) | Infrastructure | 0.00 | 0.00 | 0.00 | 4.00 | 0.00 |
| b) | Communication | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| c) | Repairs & Maintenance | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5 | HRD | 0.00 | 7.00 | 0.00 | 0.00 | 0.00 |
| a) | Within India | 0.00 | 7.00 | 0.00 | 0.00 | 0.00 |
| b) | Abroad | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6 | Other Items, if any, (Specify) | 0.00 | 7.00 | 2.00 | 2.10 | 0.00 |
| Total Revenue (B) | | 274.50 | 350.00 | 307.00 | 386.50 | 273.00 |
| Grand Total (A+B) | | 274.50 | 360.00 | 333.00 | 450.00 | 364.00 |

Table 9 : Head Wise Unit Wise Revised Estimate for the Financial Year 2016-17

(₹ in Lakhs)

| S. No. | AICRP on Goat Improvement | Capital | | | | Estt. Charges | General | | | | Total |
|--------------------|----------------------------------|--------------|-------------|-------------|--------------|---------------|---------------|---------------|--------------|--------------------|---------------|
| | | Work | Equipment | Furniture | Others | | TA | Contingency | | Other (Cap. Build) | |
| | | | | | | | | General | NEH/TSP | | |
| 1 | PC Unit, CIRG, Mathura | 0.00 | 2.00 | 0.00 | 0.00 | 0.00 | 2.50 | 9.18 | 0.00 | 0.00 | 13.68 |
| 2 | Andaman Goat Unit, Port Blair | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.15 | 14.50 | 0.00 | 0.00 | 15.65 |
| 3 | Assam Hill Goat Unit | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.90 | 0.00 | 30.00 | 0.00 | 30.90 |
| 4 | Barbari Farm Unit, CIRG, | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.50 | 15.95 | 0.00 | 0.00 | 16.45 |
| 5 | Bengal Goat Unit, Ranchi | 0.00 | 0.00 | 0.00 | 2.50 | 0.00 | 0.85 | 11.05 | 0.00 | 1.00 | 15.40 |
| 6 | Black Bengal Goat Unit, Kolkata | 0.00 | 0.00 | 0.00 | 2.50 | 8.00 | 0.95 | 8.00 | 0.00 | 1.00 | 20.45 |
| 7 | Changthangi Goat Unit, | 2.00 | 0.00 | 0.00 | 2.50 | 0.00 | 2.00 | 10.16 | 0.00 | 1.00 | 17.66 |
| 8 | Gaddi Field Unit, Palampur | 0.00 | 0.00 | 0.00 | 2.50 | 0.00 | 0.75 | 11.95 | 0.00 | 1.00 | 16.20 |
| 9 | Ganjam Field Unit, OUAT | 0.00 | 0.00 | 0.00 | 0.00 | 3.18 | 0.45 | 13.12 | 0.00 | 0.00 | 16.75 |
| 10 | Himalayan Goat Unit, IVRI | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.45 | 13.40 | 0.00 | 0.00 | 13.85 |
| 11 | Jamunapari Farm Unit, CIRG | 6.63 | 4.00 | 0.00 | 0.00 | 0.00 | 0.50 | 15.23 | 0.00 | 0.00 | 26.36 |
| 12 | Malabari Field Unit, Kerala | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.30 | 20.45 | 0.00 | 0.00 | 20.75 |
| 13 | Marwari Field Unit, Bikaner | 0.00 | 0.00 | 0.00 | 0.00 | 8.03 | 0.35 | 10.87 | 0.00 | 0.00 | 19.25 |
| 14 | Osmanbadi Unit, | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.25 | 18.50 | 0.00 | 0.00 | 19.75 |
| 15 | Sangamneri Field Unit, Rahuri | 0.00 | 0.00 | 0.00 | 0.00 | 21.54 | 0.70 | 7.26 | 0.00 | 0.00 | 29.50 |
| 16 | Sirohi Farm Unit, Avikanagar | 3.37 | 0.00 | 0.00 | 0.00 | 0.00 | 0.25 | 15.83 | 0.00 | 0.00 | 19.45 |
| 17 | Sirohi Field Unit, Vallabh Nagar | 0.00 | 0.00 | 0.00 | 2.00 | 7.00 | 0.55 | 8.70 | 0.00 | 1.50 | 19.75 |
| 18 | Surti Field Unit, N.A.U, Navsari | 0.00 | 0.00 | 0.00 | 2.00 | 11.25 | 0.00 | 3.70 | 0.00 | 1.50 | 18.45 |
| 19 | Uttarakhand Goat Unit, Pantnagar | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.60 | 13.15 | 0.00 | 0.00 | 13.75 |
| Total | | 12.00 | 6.00 | 0.00 | 14.00 | 59.00 | 15.00 | 221.00 | 30.00 | 7.00 | 364.00 |
| Grand Total | | 32.00 | | | | 59.00 | 273.00 | | | | 364.00 |

4.2 Financial / Administrative Proforma AICRP on Goat Improvement 2016-17

| Name of center | Year of Initiation | No. of sanctioned post and design action (Annexure-I) | No. of post filled (Annexure-I) | No of post vacant since when (Annexure-I) | Funds released during the year (? . Lakhs) | Previous balance (? . Lakhs) | Funds utilized (? . in Lakhs) (ICAR share) | Closing balance (? . in Lakhs) | Remarks by PC |
|--|--------------------|---|---------------------------------|---|--|------------------------------|--|--------------------------------|---------------|
| PC Unit, CIRG | 1972 | 13 | 6 | - | 13.68 | 0.00 | 10.74 | | |
| Andaman Goat Hill | | - | * | - | 15.65 | 0.00 | 15.64 | 0.005 | |
| Assam Hill Goat Unit (NEH)* | 2009 | - | * | - | 30.90 | 0.00 | 30.90 | | |
| Barbari Farm Unit | 1993 | 6 | 3 | 3 | 16.45 | 0.00 | 19.16 | | |
| Bengal Goats , Ranchi (TSP)* | 2009 | - | * | - | 15.40 | 0.00 | 19.75 | | |
| Black Bengal Unit, Kolkata | 2001 | 6 | 3 | 3 | 20.45 | 0.00 | 17.64 | | |
| Changthangi Goat Unit Leh, | 2014 | - | * | - | 17.66 | 0.00 | 16.50 | | |
| Gaddi Field Unit *(TSP) | 2009 | - | * | - | 16.20 | 1.12 | 18.06 | -0.73 | |
| Ganjam Field Unit, OUAT, Bhubaneswar | 2001 | 5 | 6 | 1 | 16.75 | 0.00 | 8.11 | | |
| Himalayan Local Goat Unit Mukteshwar | 2014 | - | * | - | 13.85 | 0.00 | 12.03 | 1.56 | |
| Jamunapari Farm Unit | 1993 | 7 | 6 | 1 | 26.36 | 0.00 | 24.31 | | |
| Malabari Field Unit, Kerala | 2001 | 5 | 6 | Nil | 20.75 | 0.00 | 26.33 | | |
| Marwari Field Unit, Bikaner | 1988 | 8 | 3 | | 19.25 | 0.00 | 19.26 | | |
| Osmanabadi Unit* | 2009 | - | * | - | 19.75 | 0.00 | 19.75 | 0.00 | |
| Sangamneri Field Unit | 2001 | 7 | 7 | Nil | 29.50 | -1.01 | 31.50 | -1.65 | |
| Sirohi Farm Unit, Avikanagar | 1993 | 5 | 5 | 8 | 19.45 | 0.00 | 19.42 | | |
| Sirohi Field Unit, RAJUVAS, Vallabhmagar | 2000 | | | | 19.75 | 0.00 | 25.78 | | |
| Surti Field Unit (TSP), NAU, Navsari | 2000 | 5 | 2 | 5 | 18.45 | 0.00 | 14.80 | | |
| Uttarakhand Local Goats | 2014 | - | * | - | 13.75 | 0.00 | 15.84 | | |

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

** The information is enclosed in Annexure 1.

AICRP on Goat Improvement
ICAR-Central Institute for Research on Goats
Makhdoom Farah, Mathura - 281 122 U.P., India

F.No. 10-42(PC)/2015-16

Dated : May 16, 2016

Proceedings

**The 16th Annual Review Meet (ARM) of ICAR-AICRP on Goat Improvement held at College of
Veterinary and Animal Sciences, KVASU, Mannuthy, Thrissur Kerala - 680651 on
May 11-12, 2016**

The ARM was organised in the seminar hall of the College of Veterinary and Animal Sciences, KVASU, Mannuthy. Dr. Joseph Methew, Registrar, KVASU, Mannuthy was the president of the inaugural function and Dr R. S. Gandhi, ADG (AP&B), ICAR, New Delhi was the guest of honour for the inaugural function. Dr. K. Deveada, Director of Academics and Research, KVASU, Mannuthy, Kerala, welcomed all the delegates including Dr R. S. Gandhi, ADG (AP&B), Dr. M. S. Chauhan, Director, CIRG, Dr Vineet Bhasin, Principal Scientist, Dr. P. K. Rout, I/C AICRP on Goat Improvement along with unit Incharges of different AICRP units, other university officials and students. The programme was started with invocation and the lighting of lamp. Dr. R. S. Gandhi, ADG (AP&B) in his inaugural deliberation emphasised that the livestock is the major force for poverty elevation and emphasized establishment of nuclear flock, conservation of threatened breeds, value addition and capacity building of different stakeholder. The Director CIRG, Dr. M. S. Chauhan emphasized upon need for work on linkage development and create models of goat farms in each village for accelerating adoption of improved practices and organized marketing. He also emphasized for implementation of artificial insemination in genetic improvement programmes as scarcity of bucks is an emerging problem in field.

The programme was followed by release of total ten (10) publications of PC Unit and other AICRP units namely, Annual PC Report and Goat Production Management Information System (GMIS) Manual (Version 1.01). Malabari Goat Field Unit, Osmanabadi Goat Field Unit, Andaman Goat Field Unit, Black Bengal Goat Field Unit, Kolkata, Gaddi Goat Field Unit, Palampur, Marwari Goat Field Unit, Bikaner, Sangamneri Goat Field Unit, Rahuri and Surti Goat Field Unit, Navsari. The inaugural session ended with vote of thanks by Dr. K. Anil Kumar, Associate Dean, College of Veterinary and Animal Sciences, KVASU, Mannuthy, Thrissur, Kerala.

The technical session I was chaired Dr R S Gandhi, ADG (AP&B), co-chaired by Dr. M.S. Chauhan, Director, CIRG and Dr. Vineet Bhasin, Principal Scientist, ICAR. The session started with the formal introduction of software “Goat Production Management Information System (GMIS)” by honourable Asstt. Director General ICAR, Dr. R S Gandhi, Dr. M. S. Chauhan, Director, ICAR-CIRG and Dr. Vineet Bhasin, Principal Scientist, ICAR. The project coordinator report was presented by Dr. P. K. Rout, I/c AICRP on Goat improvement with brief introduction of the programme, action taken report on 15th ARM Proceedings, RAC and QRT Recommendations, Salient achievement, Impact, Monitor & Evaluation, deliverable during 2016-17 and future action plan. The technical section II was started in which all the field unit presented their report i. e (i)Andaman Goat Field Unit, ICAR-CARI, Port Blair,(ii)Assam Hill Goat Field Unit, AAU, Khanpara, 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, Bhuvneshwar, (viii) Himalayan Local Goats Field Unit, IVRI, Mukteswar, (ix) Malabari Field Unit, Trichur, (x) Marwari Field Unit, Bikaner, (xi) Osmanabadi Field Unit, Phaltan, (xii) Sirohi Field Unit Vallabhnagar, (xiii) Surti Field Unit, Navsari and (xiv) Uttarakhand Local Goats Field Unit, GBPUA&T, Pantnagar.

The technical session III was also chaired by the same delegates Dr. R S Gandhi, ADG (AP&B) in which 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 2015-2016. In this session, details of GMIS Software and its modules were demonstrated to all the delegates. The necessary queries regarding GMIS were also clarified. The Following recommendations were emerged from AICRP meet.

A Plenary session was also held in which vice-chancellor Shri. S.K. Biswas Closed the session and following recommendations were made.

MAJOR RECOMMENDATIONS:

1. The management intervention should be worked out to increase the weaning weight, to increase weight at mating and to control the abortion problem in the farmer's flock.
2. Goat keeper centric requirements such as LED torch, shoes, mosquito net, water bottle, shoes, umbrella and other daily required things need to be provided.
3. Efforts should be made in the direction of Linking up of registered farmers with value chain.
4. There is a need to take up collaborative research work and publishing the research papers involving all the incharges of AICRP.

5. All the units should follow the new health management proforma and reporting will be done as per the format.
6. Tagging of all the animals should be a regular activity and tagging with year of birth, month of birth will provide an edge for the data recorder in field condition.
7. During the kidding season, the field staff should be in regular contact / visit the flocks daily for close monitoring and assistance / recording of data
8. Buck distribution / exchange among field flocks of different clusters should be done regularly on yearly basis and preferably a buck should not be used in one flock for more than two major breeding seasons.
9. Conduct training / awareness programme for goat keepers. PI should organize one awareness camp in each cluster every month
10. Preventive health care such as vaccination and deworming should be carried out regularly and maintain records of all the activities undertaken in each farmer's flock
11. Baseline data on available resources, practices and production systems to be collected for different clusters in the next 3 months and the report should be submitted to the coordinating unit
12. The centre should initiate identification and rearing of young males in farmer's flock and provide necessary inputs to farmers who have shown keen interest in this practice
13. Milk recording should be initiated immediately in all the field flocks
14. Strategic supplementation like mineral block, rock salt licks, etc. should be provided to each flock
15. A Co-PI from health, nutrition, LPM stream may be included in the project for training production system characterization, health care and awareness programmes
16. The PI of the project should make efforts to form a registered cooperative of the registered goat keepers under the project
17. The field staff may be provided digital weighing balances maximum 50 kg capacity for proper weighing of animals and also provide plastic milk feeding bottles for kid feeding. The balance need to be calibrated every year or should be replaced in every 1.5 year.
18. Documents on Package of Practices for the breed/agro climatic zone should be developed for backyard goat rearing, semi-intensive goat rearing and intensive goat rearing
19. Targeted deworming approach should be adopted by each units, therefore all the PIs should standardize FAMACHA test for each agro climatic zones.
20. Data pertaining to production and reproduction since inception of the project should be uploaded on GMIS software before Sept. 2016.
21. Second instalment will not be released before getting final AUC from the units.

22. Highlight the other activities such as Best Practices, Success Stories, Package of Practices of each unit on ICAR, CIRG, AICRP, GMIS websites.
23. There should be linkage between Sirohi Farm Unit, Avikanagar and Sirohi Goat Field Unit, Vallabhnagar to exchange bucks for free of cost.
24. Manpower pattern should be uniform in all the units and should be appointed at least one data enumerator for one village on contractual basis. The remuneration for enumerator will be Rs. 8000/-per month or as per minimum rate fixed by state government /university.
25. All units have to take up new selection objectives and have to carry out the programme in modified manner.
26. A feasibility study on goat skin quality will be carried out by CIRG scientists within the 3 months and should apprise to council.
27. As the project will be completing by March, 2017, therefore a mid-term review will be held at CIRG during September, 2016.
 - All the units will present the details of their work done during last 10 years (as applicable).
 - Analyse the achievement, impact evaluation and lesson learnt during the period.
 - Formulating the action for the next phase.
28. Registered farmer's name along with mob. No. and Adhar no. should be immediately upload on GMIS Software.
29. A cross-talking between parallel organisations such as state government sharing of knowledge, training programme can be organised in different unit by PC Unit.

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. Body weight of does needs to be improved or mating of does should be delayed.
- ii. Intervention during last stages of pregnancy by providing flushing and mineral mixture in order to reduce kid mortality below 10%.
- iii. Include one more cluster.
- iv. The effort should be made to develop specific management strategy for goats during rainy season.
- v. Milk yield recording should be carried out.
- vi. Check the data reporting in different tables for necessary modification.
- vii. Technology adoption rate should be accessed.
- viii. Baseline data & production system characterisation should be carried out.
- ix. 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. Selection criteria for goat colour should be as per breed characteristic / market demand.
- ii. Check the data on total birth during the year and birth weight recording during the year.
- iii. Management of inbreeding in flock should be carried out effectively.
- iv. The appropriate technologies should be demonstrated in the farmer's flock during different season.
- v. Milk yield recording should be carried out.
- vi. Maintain the details of exchange of bucks between clusters.
- vii. Check the data reporting in different tables for necessary modification.
- viii. Technology adoption rate should be accessed.
- ix. Baseline data & production system characterization should be carried out.
- x. 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. P. K. Senapati, PI of Black Bengal Goat Field Unit, WBUAFS, Kolkata. Following recommendations have been made.

- i. Milk yield recording should be carried out.
- ii. Per doe productivity needs to be improved.
- iii. Effective distribution of bucks should be carried out.
- iv. Strategic supplementation should provide during pregnancy stage.
- v. Linkage with KVK and other organization needs to be strengthened.
- vi. Maintain the details of exchange of bucks between cluster.
- vii. Check the data reporting in different tables for necessary modification.
- viii. Technology adoption rate should be accessed.
- ix. Baseline data & production system characterisation should be carried out.
- x. Performance was not satisfactory.

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

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

- i. Data needs to be re-analysed.
- ii. Data recording should be improved.
- iii. Maintain the details of exchange of bucks between cluster.
- iv. Check the data reporting in different tables for necessary modification.
- v. Technology adoption rate should be accessed.

- vi. Baseline data & production system characterization should be carried out.
- vii. Performance was poor.

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. Mention the selection criteria by which bucks will be selected to increase the pashmina yield.
- ii. Intervention to increase the doe weight at mating is necessary.
- iii. The males from Choumor and koyul clusters need to be procured and distributed in other cluster for improved fiber diameter.
- iv. Production performance of breeding bucks should be analyzed.
- v. Weaning weight is less and adopt some good practices to improve the same.
- vi. Develop criteria for selection of bucks based on pashmina yield and quality. Needs to define and implement the same.
- vii. Milk recording should be provided in at least 100 doe/year.
- viii. Technology adoption rate should be accessed.
- ix. Baseline data & production system characterization should be carried out.
- x. The performance of the unit needs to improve.

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

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

- i. Milk yield recording should be carried out.
- ii. Maintain the details of exchange of bucks between cluster.
- iii. *Genetic parameter estimation should be carried out.*
- iv. Develop farmer's specific kit during migration of Gaddi goats.
- v. Technology adoption rate should be accessed.
- vi. Baseline data & production system characterization should be carried out.
- vii. 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. Implement all the suggestion during field visit (April, 2016) within 3 month.
- ii. Quarterly process report to the headquarter regarding implementation of recommendation.
- iii. Budget utilization is poor.
- iv. Milk yield recording should be carried out.

- v. Technology adoption rate should be accessed.
- vi. Baseline data & production system characterization should be carried out.
- vii. The performance of the unit is not satisfactory.

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

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

- i. Tagging, effective recording and implementation of technical programme should be carried out by July 30, 2016.
- ii. The genetic group detail description should be provided.
- iii. Buck distribution should be taken up immediately.
- iv. Target Kid mortality below 5% and weaning weight not less than 9 kg.
- v. Less no. of data is collected. Try to compare with Pantja Goat Genotype.
- vi. Proper selection criteria should be developed.
- vii. Technology adoption rate should be accessed.
- viii. Baseline data & production system characterization should be carried out.
- ix. The performance of the unit needs to improve.

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. Need to identify more no. of BPL farmers and register them.
- ii. Write down success stories on “Goat as a companion animal.”
- iii. Importance of goat milk and urine need to be highlight.
- iv. Technology adoption rate should be accessed.
- v. Baseline data & production system characterization should be carried out.
- vi. Technology adoption rate should be accessed.
- vii. Baseline data & production system characterization should be carried out.
- viii. The performance is 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. Problem in selection differential data (population mean).
- ii. Tagging and identification of animals
- iii. Total birth and birth weight should be recorded.
- iv. Milk yield data – effective management tips to manage abortion in the field.
- v. Data analyzed needs to be rechecked.
- vi. Technology adoption rate should be accessed.

- vii. Baseline data & production system characterization should be carried out.
- viii. The Performance of Unit was poor.

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. Twelve month body weight recording should be carried out and adequate no. of animals should be covered and must be reported during the next meeting.
- ii. Morbidity and mortality recording should be reported properly.
- iii. Exchange of technology between units.
- iv. Technology adoption rate should be accessed.
- v. Baseline data & production system characterization should be carried out.
- vi. The performance of the unit was satisfactory.

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

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

- i. Birth weight should be recorded.
- ii. Effective management tips in farmer's flock to manage the abortion.
- iii. Birth weight should be recorded.
- iv. Selection differential is not calculated properly.
- v. Redeploy the staff from AICRP Unit to the university.
- vi. Technology adoption rate should be accessed.
- vii. Baseline data & production system characterisation should be carried out.
- viii. The performance of the unit was satisfactory.

13. Sirohi Field Unit, RAJUVAS, Vallabh Nagar, Rajasthan

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

- i. The unit should produce and supply more number of elite bucks to farmers and other agencies.
- ii. This unit should actively collaborate with Sirohi Farm Unit at CSWRI, Avikanagar.
- iii. Technology adoption rate and inbreeding should be checked in field flock.
- iv. Technology adoption rate should be accessed.
- v. Baseline data & production system characterisation should be carried out.
- vi. The performance was observed to be 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. *Need to address the problem of pneumonia during winter.*
- ii. *Define the selection criteria of Sruti goats in field flock.*
- iii. Technology adoption rate should be accessed.
- iv. Baseline data & production system characterisation should be carried out.
- v. The performance of the unit was satisfactory.

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

The report was presented by Dr. Brijesh Singh, Co-PI of the Uttarakhand Goat Unit. Following recommendations were made.

- i. Tagging of animals should be done till June.
- ii. Mortality should be reduced to less than 10%.
- iii. Data needs to corrected and re-analyzed.
- iv. Recording of each and every observation from the field.
- v. Technology adoption rate should be accessed.
- vi. Baseline data & production system characterization should be carried out.
- vii. Milk yield recording to be rechecked and breed potential to be evaluated.
- viii. The performance of the unit needs to improve.

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

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

- i. Genetic trend in milk yield and body weight.
- ii. Strengthening of Multiplier flocks.define the selection objectives of the project and justification for the contingency AICRP.
- iii. Estimation of variance and co-variance components.
- iv. Performance 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. Performance recording needs to be carried out in adopted flocks by employing data enumerators.
- ii. 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. The unit needs to improve the performance of animals.

- ii. The unit needs to improve the housing and staff constraints.
- iii. The unit should actively collaborate with Sirohi field unit at Vallabhnagar.
- iv. The Unit has to immediately adopt farmers and two–three KVK's for validation of technologies and breed improvement in farmers flock.
- v. The performance of the unit was satisfactory.

16th Annual Review Meet ended with vote of thanks by I/C PC Dr. P. K. Rout. On this occasion Hon'ble ADG and Director CIRG gave their blessings to all units.

List of Participants

| S.N. | Name of Participant |
|------|---|
| 1. | Dr. R S Gandhi, ADG (AP&B), ICAR, New Delhi |
| 2. | Dr. M. S. Chauhan, Director, ICAR-CIRG, Makhdoom, Farah, Mathura |
| 3. | Dr. Vineet Bhasin, Principal Scientist (AG&B), ICAR, New Delhi |
| 4. | Dr. P. K. Rout, I/C, AICRP, CIRG, Makhdoom, Farah, Mathura |
| 5. | Smt. Prabha Chauhan, Section Officer, ICAR, New Delhi |
| 6. | Dr. Jay Sundar, Andaman Goat Field Unit, ICAR-CIARI, Port Blair, Andaman & Nicobar Island |
| 7. | Dr. N. Nahardeka, Assam Hill Goat Field Unit, AAU, Khanpura, Guwahati, Assam |
| 8. | Dr. P. K. Senapati, Black Bengal Goat Field Unit, WBUV and FS, Kolkata, West Bengal |
| 9. | Dr. L. B. Singh, Black Bengal Field Unit, BAU, Kanke, Ranchi, Jharkhand |
| 10. | Dr. F. D. Sheikh, Changthangi Goat Field Unit, SKUAST, Kashmir, Leh-Ladakh, Jammu & Kashmir |
| 11. | Dr. P. K. Dogra, Gaddi Field Unit, HPKVV, Palampur, Himachal Pradesh |
| 12. | Dr. D. K. Karna, Ganjam Field Unit, OUAT, Bhubaneswar, Orissa |
| 13. | Dr. A. K. Sharma, Himalayan Goat Field Unit, ICAR-IVRI Campus, Mukteshwar, Uttarakhand |
| 14. | Dr. Thirupathy Venkatechalapathy, Malabari Field Unit, KV&ASU, Mannuthy, Thrissur, Kerala |
| 15. | Dr. G. C. Gahlot, Marwari Field Unit, RAJUVAS, Bikaner, Rajasthan |
| 16. | Dr. Chanda Nimbkar, Osmanabadi Goat Field Unit, NARI, Phaltan, Maharashtra |
| 17. | Dr. Sanjay Mandakmale, Sangamneri Goat Field Unit, MPKV, Rahuri, Maharashtra |
| 18. | Dr. R. K. Nagda, Sirohi Field Unit, RAJUVAS, Vallabhnagar, Rajasthan |
| 19. | Dr. Kuldeep Tyagi, Surti Goat Unit, N.A.U., Navsari, Gujarat |
| 20. | Dr. S. K. Singh, Prof, Uttarakhand Goat Unit, GBPUA&T, Pantnagar, Uttarakhand |
| 21. | Dr. M. K. Singh, Barbari Farm Unit, ICAR-CIRG, Makhdoom, Farah, Mathura |
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| 23. | Dr. S. S. Misra, Sirohi Farm Unit, ICAR-CSWRI, Avikanagar, Rajasthan |
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