Production Performance and Evaluation of Goat Breeds under AICRP: 2024-25

अखिल भारतीय बकरी सुधार समन्वित शोध परियोजना

All India Coordinated Research Project on Goat Improvement



Goat – The future animal

2024-25

भाकृअनुप
ICAR

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1. INTRODUCTION

AICRP on Goat Improvement is a unique long term, structured programme aimed to bring upon genetic improvement and conservation of goat genetic resources of the country in their respective habitat and development of germ-plasm resource centres. The programme explores genetic variations in local breeds through systemic animal identification and performance recording, selecting superior goats on the basis of their performances, development of breed and region-specific package of management practices, technologies and its validation in farmers' flock. ICAR in the year 1971's under Vth Five Year Plan started a network programme later called ***All India coordinated Research Project on Goat (*AICRP)** to achieve rapid increase of genetic potential of indigenous goat for improved milk, meat and mohair yield by cross-breeding indigenous breeds with high yielding exotic breeds (milk and mohair) and other better-producing indigenous breeds for meat component. The head quarter of project was made NDRI, Karnal from 1970 to1974 thereafter, CSWRI, Avikanagar from 1974 to1976 and CIRG Makhdoom from 1977 onwards. Alpine, Saanen, Anglo-Nubian and Toggenburg were used as exotic dairy breeds whereas; Beetal and Malabari goats as indigenous breeds. Gaddi and Sangamneri were used as native breed and Russian Angora as exotic breed of goats for mohair. Chegu in 1971 and Changthangi in 1973 goats were added to improve pashmina quality and quantity through selection. Later on, in VIth plan (1976) three units namely Marwari, Sirohi and Kutchi were added for improving meat potential through selective breeding and 3 more breeds namely Black Bengal in 1976 at BAU, Ranchi, Assam Local goat in 1977 at AAU, Bernihat and Shingari in 1983 at Jorethang, Sikkim through crossbreeding with Beetal and Jamunapari as indigenous improver breeds. The crossbreeding with temperate breeds found to be invariably unsuccessful and unsustainable in the long term. The crossbreeding with indigenous breeds was terminated due to increase in age first kidding, decrease in multiple births and high kids' mortality in crossbreds and non-sustainable in the long term.

The All India Coordinated Research Project on Goat was phased out with effect from 31st March 1990 with the experience gained and information generated, it was decided to **abandon crossbreeding and to follow selective breeding in the VIIth five-year plan (1992–97)** and improve meat and milk production through **selective breeding** in indigenous breeds**.** The "Network Project on Goat Improvement" was launched with effect from 1 April 1990 with an aim to define, characterize and improve the productivity of indigenous breeds through selective breeding in their respective breeding tract and natural habitat. Presently, program is covering 18 breeds and 19 centres as funding units and 7 breeds with 11 centres as non-funding units across the country. Three breeds namely Barbari, Jamunapari and Sirohi are being improved under semi-intensive farming system at institutional organized farms. Other breeds are being improved under farmer's flock in their respective home tracts. The project is maintaining 500-750 goats under farm unit at Institutional nucleus flock, 100-150 goats of nucleus flock under field units and 3500-5000 goats with adopted farmer's flock. Currently project is focusing on building farmer participatory infrastructure for sustainable genetic improvement and conservation of caprine resources, action plan for breed specific research issues, development of multiplier flocks to ensure superior goat availability for improvement, entrepreneurship and skill of farmers, adoption of technologies, promoting animal welfare and women participation, enhancing employment and income of farmers and goat based livelihood activities for deprived communities and people of disadvantageous regions.

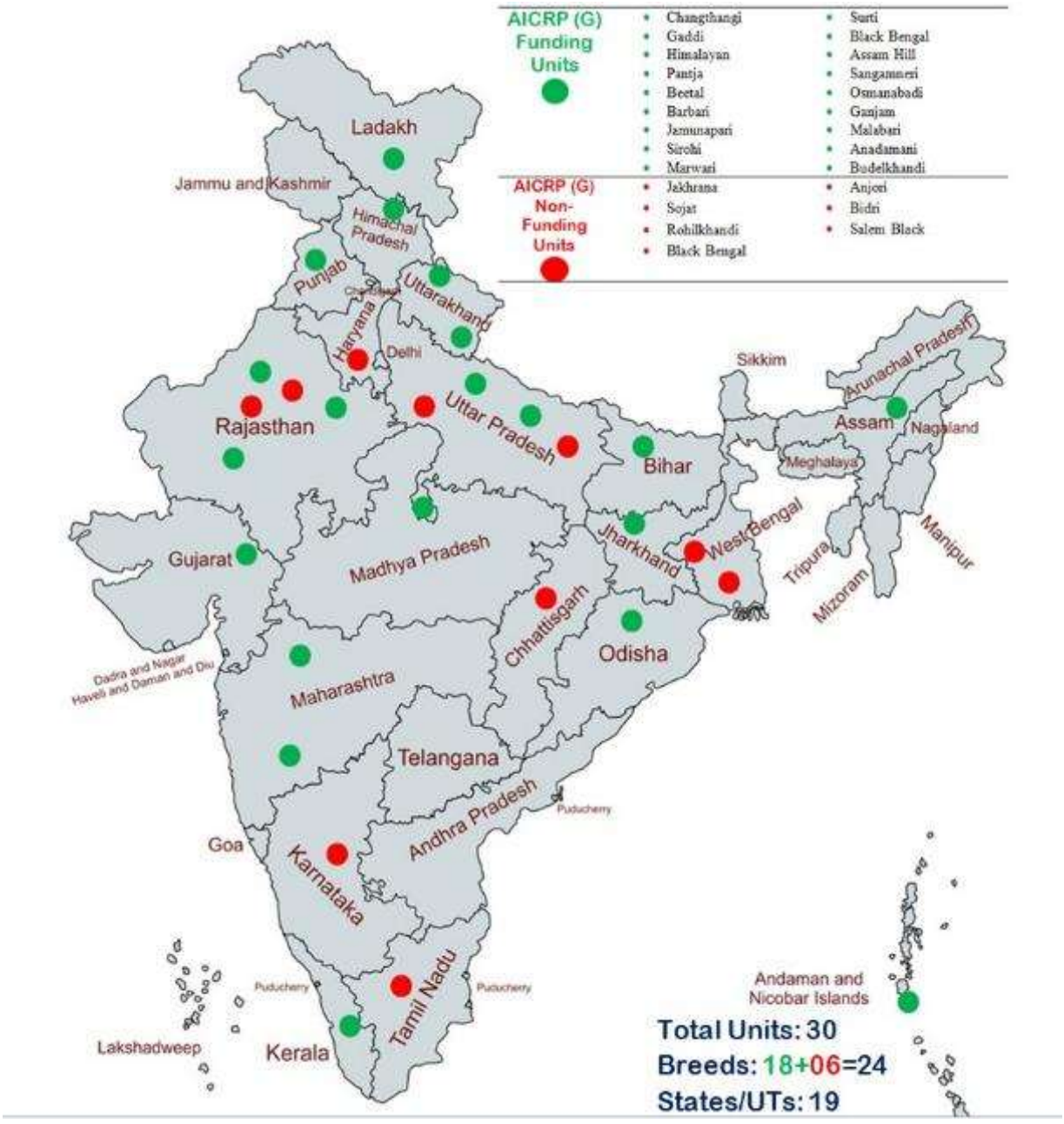
The details of funding and non-funding (Institutional Support) units of AICRP on Goat Improvement are presented below

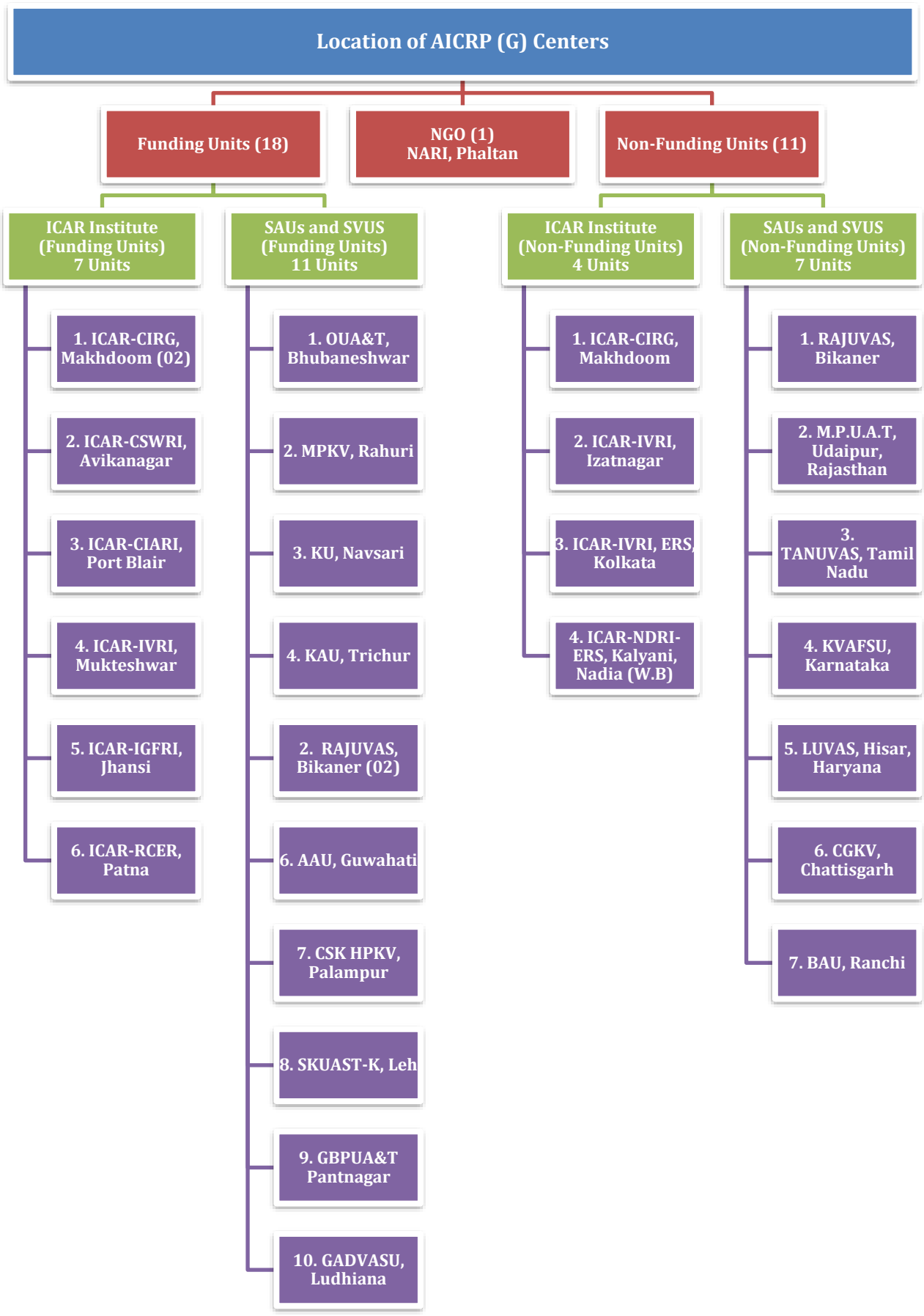
Table 1: Coordinating Centers of AICRP on Goat Improvement

S.N.	Centre	Location	Starting Year
1	**Project Coordinator Cell**	**ICAR-CIRG, Makhdoom, Uttar Pradesh**	**1977**
Funding Units			
Farm Units			
1	Barbari	ICAR-CIRG, Makhdoom, Uttar Pradesh	1993-94
2	Jamunapari	ICAR-CIRG, Makhdoom, Uttar Pradesh	1993-94
3	Sirohi	ICAR-CSWRI, Avikanagar, Rajasthan	1993-94
Field Units			
4	Marwari	RAJUVAS, Bikaner, Rajasthan	1988-89
5	Ganjam	OUAT, Bhubaneswar, Odisha	2001-02
6	Malabari	KV&ASU Mannuthy, Thrissur, Kerala	2001-02
7	Sirohi	RAJUVAS, Vallabhnagar, Rajasthan	2001-02
8	Surti	N.A.U., Navsari, Gujarat	2001-02
9	Sangamneri	MPKV, Rahuri, Maharashtra	2002-03
10	Assam Hill	AAU, Khanpara, Guwahati, Assam	2009-10
11	Gaddi	HPKVV, Palampur, Himachal Pradesh	2009-10
12	Osmanabadi	NARI, Phaltan, Maharashtra,	2009-10
13	Andamani	ICAR-CIARI, Port Blair, A & N Island	2014-15
14	Changthangi	SKUAST, Kashmir, Leh-Ladakh, J&K	2014-15
15	Chaugarkha	ICAR-IVRI Campus, Mukteshwar, Uttarakhand	2014-15
16	Pantja	GBPUA & T, Pantnagar, Uttarakhand	2014-15
17	Black Bengal	ICAR-RCER, Patna (New Centre)	2018-19
18	Bundelkhandi	IGFRI, Jhansi (New Centre)	2018-19
19	Beetal	GADVASU, Ludhiana, Punjab	2022-23
Non- Funding Units			
1	Black Bengal	BAU, Kanke, Ranchi, Jharkhand	2009-10
2	Anjori	DSVCKV, Durg	2023-24
3	Black Bengal	ICAR-IVRI, ERS, Kolkata	2023-24
4	Black Bengal	ICAR-NDRI-ERS, Kalyani, Nadia (W.B)	2023-24
5	Bidri	KVAFSU, Nandinagar, Bidar, Karnataka	2023-24
6	Jakhrana	ICAR-CIRG, Makhdoom, Uttar Pradesh	2023-24
7	Jakhrana	LUVAS, Hisar, Haryana	2023-24
8	Rohilkhandi	ICAR-IVRI, Izatnagar	2023-24
9	Sojat	RAJUVAS, Vallabhnagar, Rajasthan	2023-24
10	Sojat	MPUAT, Udaipur, Rajasthan	2023-24
11	Salem Black	VCRI,Namakkal, Tamil Nadu, India	2023-24
• **Shifted to non-funding from 2023-24**			

AICRP is also working in remote and disadvantageous region such as Changthangi (Leh-Ladakh), Gaddi breed at Palampur, Chaugharka at Mukestswar and Andamani Goat at Andaman & Nicobar Island.

Distribution of 30 AICRP (G) centres in different Agroclimatic Regions




Location of AICRP (G) Centers
Funding Units (18)
NGO (1)
NARI, Phaltan
Non-Funding Units (11)
ICAR Institute (Funding Units) 7 Units
SAUs and SVUS (Funding Units) 11 Units
ICAR Institute (Non-Funding Units) 4 Units
SAUs and SVUS (Non-Funding Units) 7 Units
1. ICAR-CIRG, Makhdoom (02)
2. ICAR-CSWRI, Avikanagar
3. ICAR-CIARI, Port Blair
4. ICAR-IVRI, Mukteshwar
5. ICAR-IGFRI, Jhansi
6. ICAR-RCER, Patna
1. OUA&T, Bhubaneshwar
2. MPKV, Rahuri
3. KU, Navsari
4. KAU, Trichur
2. RAJUVAS, Bikaner (02)
6. AAU, Guwahati
7. CSK HPKV, Palampur
8. SKUAST-K, Leh
9. GBPUA&T Pantnagar
10. GADVASU, Ludhiana
1. ICAR-CIRG, Makhdoom
2. ICAR-IVRI, Izatnagar
3. ICAR-IVRI, ERS, Kolkata
4. ICAR-NDRI-ERS, Kalyani, Nadia (W.B)
1. RAJUVAS, Bikaner
2. M.P.U.A.T, Udaipur, Rajasthan
3. TANUVAS, Tamil Nadu
4. KVAFSU, Karnataka
5. LUVAS, Hisar, Haryana
6. CGKV, Chattisgarh
7. BAU, Ranchi

2. OBJECTIVES AND ACTIVITIES OF THE AICRP ON GOAT IMPROVEMENT

The improvement and conservation of goat genetic resources is necessary to ensure sustainable income, employment, nutrition of rural people and also for rural entrepreneurship particularly of women. The genetic improvement programme has been undertaken through structured and in systemic manner by adopting cluster approach with farmers participation in the habitat of breed. The objectives are as follows:

Objectives

1. Genetic improvement of major production traits and product quality in different agro-climatic regions.
2. To increase the goat productivity in small livestock production system and to develop sustainable community breeding model at village level.
3. To develop germ-plasm resource centers in different agro-climatic zones and to validate the goat production technologies in different regions.
4. Capacity building of goat keepers and stakeholders for sustainable and profitable goat husbandry.

Technical Program of Field Units (2021-26)

1. The unit will maintain minimum five cluster / centres having at least 2000 breedable does with 500 doe in each cluster.
2. Each unit will survey, identify and map the breeding tract of the respective breed and collect baseline data of clusters.
3. Production system characterization will be undertaken which will include information on production and management practices, breed composition, population trends, feeding system, disease pattern and socio-economic conditions.
4. Body weights will be recorded from birth to 12 months of age at 3 months interval. Milk yield will be recorded at 15 days interval up to 60/90/150 days of lactation length. Similarly pashmina fibre recording will be carried till 18 months of age.
5. Male kids born from genetically superior does will be identified at weaning (3 month of age) and initially selected twice of requirement. Each year fifty selected kids will be purchased for future buck production and will be reared till the age of final selection (9/12 month) either with the help of few progressive farmers of the adopted area on cost / benefit sharing basis or at nucleus farm of field unit.
6. For Second stage males and females will be selected on the basis of 6/9 month body weight and type birth (triplets and twins). For milk yield 90 days / total milk yield (TMY) of the dam be considered for selection criteria.
7. The bucks required for distribution in adopted areas will be given on a book value to registered farmers while others can be sold to farms/other agencies involved in goat improvement. After two to three breeding seasons, bucks will be either rotated amongst clusters to avoid inbreeding or sold outside of adopted area for breed improvement.
8. Semen of elite bucks from each collaborating unit will be collected and preserved in semen banks. Preferably in collaboration with semen bank available at university / NBAGR, Karnal.
9. The selected breeding bucks should be provided to buck keeper with agreements that the buck keepers ensure their proper care and utilization. Maintenance charges of bucks should be recovered by charging a fee for buck service. The bucks should also be insured.
10. Exchange of breeding males across clusters and villages should be carried out in every year.
11. The improvement in body weight, milk yield and reproductive performances of the progeny will be estimated over the years/generation.
12. The animals for performance studies will be selected from farmer's flock under existing transhumance (migratory) system. For this, about 450 animals from three centres/ migratory routes in different areas from different flocks will be selected and reared under existing

management system in collaboration with the farmers. (Gaddi, Changthangi, Ganjam)

13. Based on disease profile, units will prepare and implement annual prophylactic health calendar to prevent morbidity and mortality. Necessary vaccines/drugs will be purchased from project fund and also explore effective collaboration with state AH department.
14. Deworming should be judiciously done and dewormer should be changed every year to avoid development of anthelmintic resistance. FAMACHA needs to be popularized among the farmers.
15. Awareness programme, Gosthi, Meeting and Training programmes will be regularly conducted to increase adoption of technologies.
16. Efforts will be made to form goat breeder / cooperative societies / self-help groups.
17. Documentation of price trend for live goats and goat products viz. meat, milk, skin, hair and manure and preference of consumers for developing structured market.
18. Multiplier flocks in target frame should be developed to meet out the requirement of superior pure-bred goats for the other farmers and development agencies. Performance of multiplier flock will be presented including sale of purebred goats.
19. Organize animal competitions with wide publicity to identify and popularize pure-bred and high potential animals from a larger area.
20. Implementation of record keeping by encouraging farmers to adopt and discuss selection criteria / practices followed by farmers/ buck owners.
21. Organization of workshop in goat production, adoption of breeding practices, value addition, structured marketing and strategic/semi-intensive feeding practices.
22. Demonstration should be conducted for the adoption of complete feed technology by locally available feed resources for balanced feeding to goats.
23. Create a data base of owners of superior animals and make it available to State Government, authorities so that they can purchase bucks from them on preference for distribution under government schemes.
24. Efforts will be made to form goat breeder's society's, cooperative breed society and to register the goat flocks in the breeding tract of the respective breeds.
25. Producer Groups may be linked with Government programme such as MGNREGA, National Livestock Mission and National Nutritional Mission. Producer group can work towards development of wasteland for fodder development.
26. Arrangement may be made for farmer's centric inputs (shoe, rain coat, canvas for mountain goats and mosquito repellent etc.) distribution
27. Tribal villages be identified and tribal farmers should be provided skill and incentive to promote profitable goat farming.
28. Target for different performance traits should be fixed on the basis of standard deviation utilizing 5-year data.
29. Performance of reproductive traits should also be properly recorded and documented.
30. Grading up of non-descript goat should be taken up in target made by supplied bucks in the home tract and recorded their performance.
31. Unit should identify major research issues and road map for their solution.
32. Milk and Meat nutrient profiling of breed should also be conducted.
33. Evaluation and assessment of breed standards including breeding goat should also take account in demand. Breeding strategy to framed maintain breed standard and their integration with production and adaptability traits.

Technical Program (2021-26) for Farm Units

1. Each unit will maintain minimum of 300 breedable does and 20-30 bucks under semi-intensive system of management.
2. Selection of males and females will be made on the basis of 9 months body weight of the individual kid and total milk yield (TMY) of their dam.

3. Second stage selection of females on the basis of its type of kidding and first lactation milk yield.
4. Important production data like body weight at different age group (birth, 3, 6, 9 and 12 months), milk yield at different ages, Weight at service and kidding, age at service and kidding, type of kidding, sex of kids, parity order, sire and dam number to be recorded.
5. Semen of bucks will be tested for quality before use for breeding
6. Five hundred semen doses of minimum 10 elite bucks should be stored in semen bank.
7. Superior goats should be provided to farmers and goat development agencies for field improvement.
8. Establishment of Multiplier flock should be encouraged with selected farmers to develop germplasm resource centre and to encourage farmer's participation in sustainable genetic improvement and for entrepreneurship development. Performance of multiplier flock will be presented including sale of purebred goats.
9. Separate male and female lines should be developed for growth and milk in dairy breeds.
10. Culling on production ground will be done on the basis of poor's performances.
11. Morbidity and mortality pattern should be monitored and documented.
12. Each unit should create linkage with KVKs in the home tract of the breed to strengthen community breed improvement and providing breeding services at cluster or village level. Twenty sires free of cost can be spared for improving the production performance in the farmers' flocks. Such KVK should follow AICRP Field Units Technical programme in collaboration with Concerned AICRP unit to assess genetic improvement and overall impact.
13. Feed lot experiments need to be carried out to assess growth rate, FCR, carcass qualities and quantities, packages of management practices and technology etc.
14. Capacity building of farmers and trainers on different aspects of goat production.
15. Economics of goat rearing should be analysed for farm and multiplier flocks.
16. Target will be fixed on the basis of standard deviation utilizing 5-year data.
17. Progeny testing should be initiated in dairy and other high milk potential dual-purpose breeds.
18. Data should be compiled and presented for grading up of non-descript goat by supplied bucks in the home tract of respective breed.
19. Unit should identify major research issues and road map for their solution.
20. Milk and Meat nutrient profiling of breed should be assessed.
21. Characterization of Goat Production System in Field should be regularly conducted.
22. Promote and integrate SHG, Cooperative farming in breed improvement and entrepreneurship development.

3. ACTION PLAN CHART OF AICRP ON GOAT IMPROVEMENT

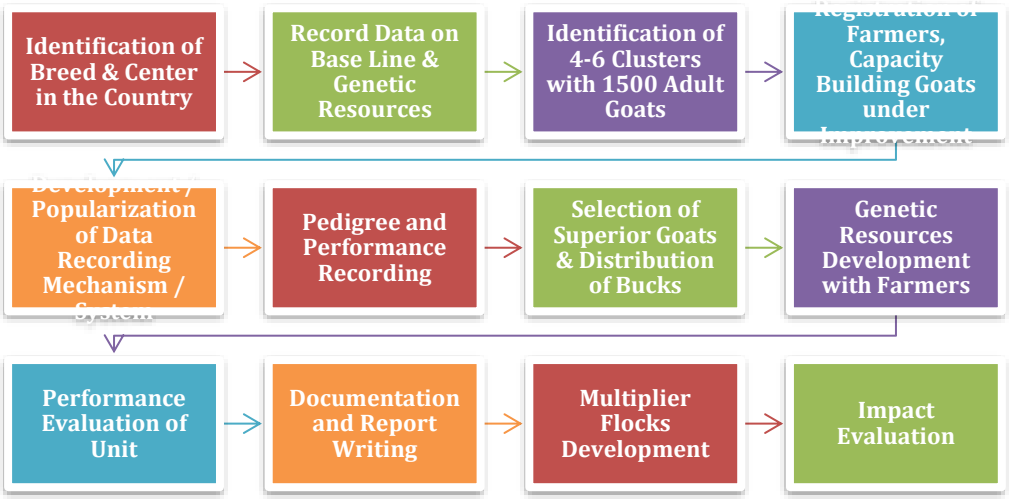


Table 2: Deliverables of the Project (2021-22 to 2024-25)

Measurable Activities	2021-22	2022-23	2023-24	2024-25
Selection of clusters & farmers and Registration of adult doe (No. of animals)	16769	14544	14091	32328
Registration of adult doe (No. of animals)	19122	17593	22956	28196
Animal Identification and performance recording (No. of animals)	38296	32899	31537	55435
Health Coverage with vaccination and deworming etc. (No. of animals)	159823	136429	152447	134116
Training programs conducted for capacity building of goat keepers and stake holders	161	90	143	186
Number of Farmers Benefitted	8591	6995	8365	9809
Bucks Distributed for Improvement from field Units	353	338	330	556
Multiplier / Commercial Flocks Established	8	9	31	72
Semen doses cryo-preserved for *in situ / ex situ* conservation of important breeds (No.)	2716	6800	4271	3774
Field demonstration/ Health Camp/ Exposure Visit/ Farmers Camp)	4283	5861	4955	5035
Women farmer trained	2486	3900	3905	2422
Publication of Research Papers	48	50	43	34



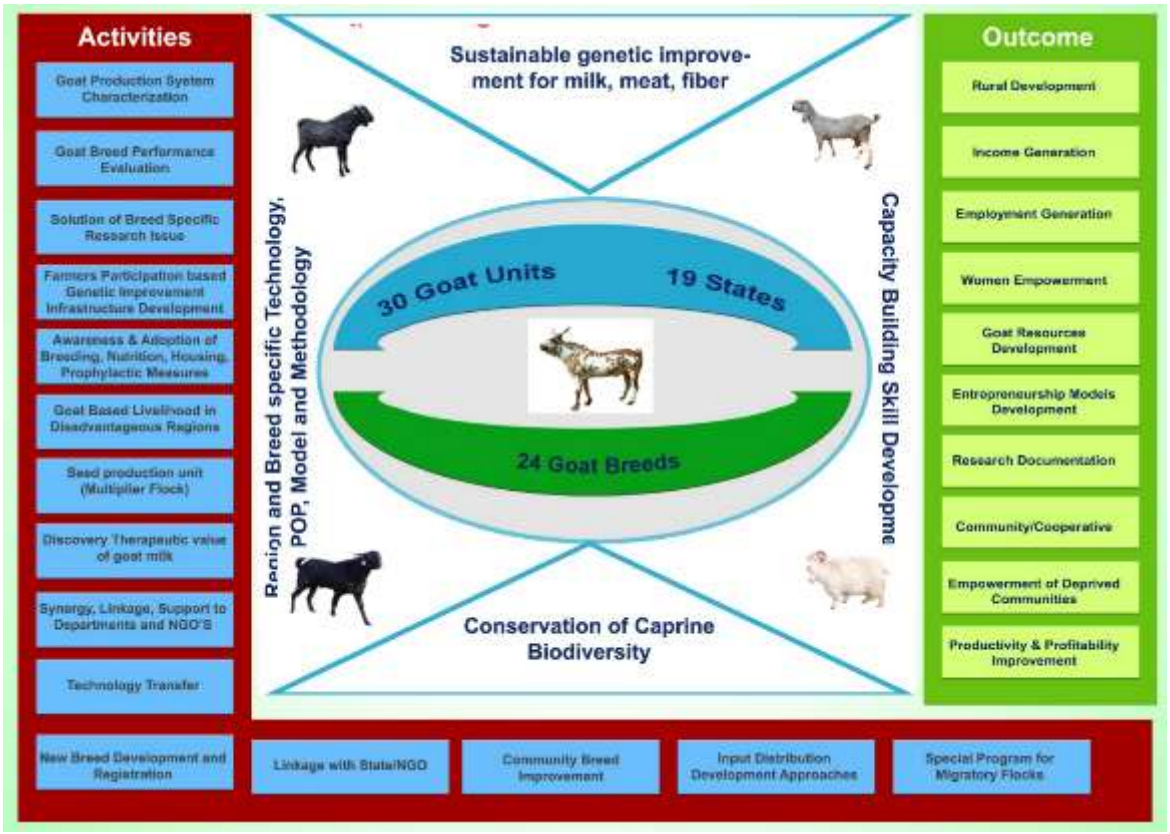
4. ACTION TAKEN REPORT

Proceeding of the 22nd Annual Review Meet (ARM) of ICAR-AICRP on Goat Improvement held at *CSK-HPKV, Palampur, Himanchal Pradesh* October 15-16, 2024

S. N.	Recommendations	Action Taken (Please quantify your Details)
1	The AICRP fund should be judiciously and efficiently utilized as per priority to address core activities/objectives.	Instructions, in this regard have been issued from time to time by PC Cell.
2	Targets for each unit should be fixed in the beginning with respect to adoption farmers flock, goat population, nucleus flock, multiplier flock, commercial farm, buck distribution, grading up, women farmers trained.	Targets for all important activities have been given in the beginning of the year.
3	A population of 5000-8000 should be covered under the program by each field unit. General parameters/observations should be obtained from entire population while important performance parameters should be recorded from animals maintained at the nucleus flock, multiplier flock and progressive farmers' flock. AICRP should be duly acknowledged in all the relevant documents/ publications.	Most of field units have been working with more than 5000 goat population. However, some units such as Surti, Malabari, Beetal, Bundelkhandi instructed to expand more, more goats and more farmres under the project by adopting more farmers / clusters.
4	Farm unit should maintain nucleus flock with minimum 300 breedable does and field unit's nucleus flock should maintain minimum 75-100 breedable does.	All the farm and field units are progressively moving closer to targets. However, some units such as Bundelkhandi, Surti, Black Bengal, Ganjam, Chaugarkha and Gaddi have space and management issue.
5	Genetic analysis of data should be conducted by following appropriate standard procedure. Data should be precisely collected as per given format and a team of 5 scientists of different units should be formed to analyse data using advanced analysis software.	1. Instructions issued and unit in-charges have been sensitized for precise data collection. 2. A team of five scientists (M.K. Singh, S.S Misra, R.K. Nagda, R. Thirupathy Venkatachalapathy and Indrasen Chauhan) have formed. So far only some units have provided the data to PC Unit.
6	Weight should be recorded at birth, 3, 6, 9, and 12 months. Breeding values should be estimated based on milk yield, body weight, and prolificacy. While setting the targets, the standard deviation of the traits should be properly analysed based on 10/20 years data.	1. Targets have reset based on 10 years performance and activities. 2. Breeding value of bucks is estimated as per selection index of technical program.
7	The nutraceutical properties of milk be identified, validated & documented by CIRG.	Long pending issue and to be validated and documented.
8	Infrastructure (semen cryo-preservation lab) and elite bucks available at nucleus flock with farm and field units should be utilized to promote artificial insemination in goats under field. A Committee may be constituted for finalizing nutrient requirements for goats at different growth stages including products (milk meat, fibre etc.), management systems and agro - climatic regions.	All the farm and many field units are working for artificial insemination / semen cryopreservation to increase the adoption by increasing conception rate.
9	Multi-disciplinary team should be formed within 30 days and circulated to PC. Template of presentation should include name of Co-PIs, discipline and work assigned to each co-PI.	Template and presentation finalized and sent to ADG (AB&P), Jun 24, 2025 and all the unit In- charges.
10	Short video recordings should be made for important activities, innovations, management practices, success stories and constraints faced by the farmers. Good PoP for migratory flocks in different regions/seasons should be developed. Separate package of practices be prepared for small, medium-large flocks.	All the units are preparing desired extension material for effectively dissemination of management practices and technologies.
11	The complete history of all AICRP centres from the beginning should be compiled including performance, achievements, changes in technical program, remarks etc.	1. History of AICRP in brief has complied 2. Impact analysis report of AICRP has complied.

12	Five-year data should be utilized for presentation for annual review meet.	All the centres have communicated for analysing 5-year data for ARM presentation.
13	RA/SRF should be dropped from all AICRP Field and Farm Units.	All the units have dropped RA and SRF and presently keeping YP and data enumerators.
14	Climate based management advisory should be given to different regions particularly for migratory flocks.	Region specific climate advisories are developed and shared with goat farmers especially for migratory goat rearing communities. These advisories pertain to breeding practices, animal health, shelter design and water management, feed and fodder value addition, utilization.
15	Non-funding units should maintain nucleus flock with 80-100 goats and collect data as per technical program.	All the non-funding unit in-charges communicated to maintain minimum 80-100 adult female goats.
16	All those units which are graded as C or D should be physically visited by PC Cell on priority up to December 2024 and their status report should be submitted separately to ICAR HQ, Delhi.	All the low performing units had physically evaluated (Surti, Sangamneri, Assam Hill, Ganjam). Marwari unit will be visited soon.

Activities and Outcome of AICRP



5. RESEARCH ISSUES OF DIFFERENT GOAT BREEDS UNDER AICRP

S. N.	Name of Breed	Research Issues
1	Jamunapari	1. Decrease in milk yield & lactation length (changes in selection criteria) in habitat. 2. Decline in population size. 3. Lack of market and market infrastructure for milk. 4. Loss of natural habitat (eco-system) 5. Inbreeding in home tract. 6. FCR 7. Model/ strategy for intensive rearing system.
2	Barbari	1. Support for catering the high demand of animals 2. FCR 3. Exploring potential for milk as dairy breed 4. Housing system (model) for intensive management for different regions. 5. Exploring productivity and adaptability in semi-hot humid regions
3	Black Bengal	1. Supply of pedigreed and potential animals. 2. Heavy uncontrolled breeding at younger ages. 3. Suitability for stall feeding and assessment of FCR 4. Low milk yield and smaller body size 5. Kid Mortality 6. Cross breeding & uncontrolled breeding
4	Assam Hill	1. Establishment germ-plasm resources centre 2. Low milk yield and smaller body size 3. Uncontrolled breeding 4. Suitability for stall feeding 5. Kid mortality
5	Ganjam	1. Holistic approach to increase growth rate, milk yield and prolificacy 2. Encouragement of farmers to adopt semi-intensive or partial semi- intensive management (commercial approach) 3. Low productivity and profitability
6	Sirohi (Farm/Unit)	1. FCR 2. Experiment for stall/intensive feeding and their validation in farmer flock to encourage it 3. Exploring potential for milk 4. Marketing of goat milk
7	Beetal	1. FCR 2. Low interest for milk among farmers (selection criteria) 3. Marketing of milk 4. Model for intensive system and cost effectiveness
8	Gaddi	1. Natural/organic meat and milk production 2. Package of practices during migration to enhance productivity, survivability and profitability 3. Adoption of strategy/supplementary feeding
9	Changthangi	1. Low prolificacy 2. Low growth rate 3. Decline in quality of pashmina 4. Poor adoption of management measures 5. FCR
10	Chaugarkha	1. Housing of goat 2. Low milk yield 3. Fodder conservation 4. Predation protection 5. Low prolificacy 6. Indiscriminate/uncontrolled breeding
11	Bundelkhandi	1. Low milk yield 2. Low prolificacy

		3. Low awareness and adoption of improved management 4. FCR
12	Surti	1. Decline in population size (High level) 2. Breed dilution with Jamunapari and Sojat 3. Decline in milk yield 4. Suitability for stall feeding 5. FCR 6. Semi-intensive/intensive model development
13	Sangamneri	1. Decline in population size (Moderate rate) 2. Breed dilution by Sojat and Jamunapari 3. Decline in milk yield 4. Suitability for stall feeding (model) 5. Exploring commercial attributes of breed
14	Osmanabadi	1. Exploring adaptability in arid and semi hot humid region 2. FCR 3. Suitability for stall feeding (model) 4. Exploring potential as dairy breed
15.	Malabari	1. Potential as dairy breed in coastal and hot humid region 2. FCR 3. Suitability for stall feeding (model)
16.	Marwari	1. Exploring potential as dairy breed 2. FCR 3. Entrepreneur model
17.	Andamani	1. Enhancing milk yield 2. Developing adaptation strategies toward impending climate change 3. FCR
18.	Pantja	1. Housing for predation and production 2. Low milk yield
19.	PC Cell	1. Crossbreeding with exotic goat breeds (Review) 2. Crossbreeding among indigenous goat breeds (Review) 3. Implementation of breeding with Frozen Semen (Assessment & Strategy) 4. Impact of AICRP



6. TSP VILLAGE ADOPTIONS AND WORK PLAN

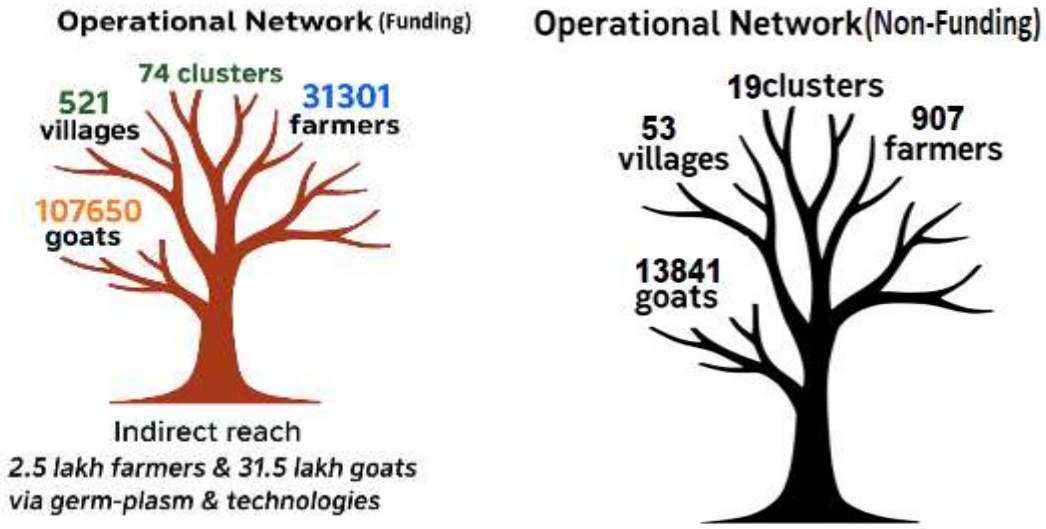
1. Base line survey.
2. Production system characterization.
3. Present practices and indigenous knowledge.
4. Need assessment (training, technologies)
5. Specific technology intervention implementation
6. Impact assessment

Table 3: Villages Covered Under TSP Programme During 2024-25

S. N.	Goat breed (State)	Village (District)
1	Assam (Assam Hill)	Dighalbori (Morigaon); Tepesia, Teteliguri, Tetelia (Kamrup); Majgaon (Nagaon)
2.	Andamani (A & N Islands)	Small Lapathy, Big Lapathy, Mus (Nicobar); Herminder Bay (South Andaman)
3	Black Bengal (Bihar)	Dhobani, Bhatta, Lalmatiya, Korasi (Jamui)
4	Changthangi (UT Ladakh)	Samad, Kharnak, Gya, Chumathang, Gyaltsa Nomad (Leh)
5	Black Bengal (Jharkhand)	Kundala, Dungirdih, Choungagutu, Lungtu, Chichibandri & Jaranga, Gurahapa, Serenghatu, Hembrom, Marangdih (Ranchi & Khunti)
6	Pantja (Uttrakhand)	Bamanpuri, Chaumela, Sisona, Majhra Sisona, Matiya, Alabirdhi, Rajpur Fatehganj (U.S.Nagar)
7	Sirohi Field Unit (Rajasthan)	Karget, Khalia, Godwa, Tank, Naya Kheda, Falet (Udaipur)
8	Malabari (Kerla)	Pudur, Pattanakavala, Cheerakadavu (Palakkad); Kudiyanmala, Payyavoor (Kannur)
9	Himalayan (Uttrakhand)	Sunkhari Kalan, Jhankat (Udham Singh Nagar)
10	Budelkhandi (M. P.)	Sakdi, Bhimbayda, Sejgaon, Thodsindhi (Alirajpur)
11	Ganjam (Odisha)	Sakiri, Guhariayapata, Lunigundi, Tinichakia, Burudungi, Nabagocha, Gramadebati (Ganjam)
12	Surti (Gujarat)	Vangan, Vihiramba, Tankalipada, Vaydun, Kamadyavan, Subir, Baramyavad, Pimpari, Shamgahan, Bhaykhal, Chinchinagavatha, Sakarpatal, Kosimada, Bhenskatri, (Dang); Tavdi, Kalthan (Navsari)
13	Gaddi (H.P.)	Suggar, Bundla, Nachir, Gugga saloh, Gadiyara, Pharer, Arla, Jakhni, Gallu, Jandpur, Kharot- Balla, Darang, Dhera, Naura, Kahanphat (Kangra)

7. ACHIEVEMENT

The project is making sincere efforts through participatory cluster approach for sustainable genetic improvement, conservation, development of breed and region-specific technologies, addressing breed specific research issues, evaluation of genetic potential of 24 goat breeds in 19 states of different agro-climatic regions for their sustainable improvement, capacity building of goat farmers with special attention for women and weaker section of societies.



Output	Outcomes	Achievements from base year to 2024-25
Body Weight Improvement	Breeds witnessed 32-72% increase in body weights at different ages, up to 84% improvement in challenge feeding	Sirohi: 72%, Jamunapari: 52% Barbari: 47%, Malabari 48%, Osmanabadi: 60% Ranged in different breed: (32-72%)
Milk Yield Improvement	Many breeds witnessed >50 to 106% increase in milk yield	Barbari: 106%, Sirohi: 82% Osmanabadi: 92%, Jamunapari: 69%, Surti:82%, Sangamneri: 99%, Malabari:84%, Ranged in different breed: (22-106%)
Pashmina Yield	Changthangi pashmina yield improved from 200 to 400 g	400g up to 900gm/Y in some clusters
Survival Rate (Mortality)	Mortality reduced via via breeding, strategic management and prophylactic support from 15–25% to 2.1–7.6%	Average mortality in last 10 Year Osmanabadi: 3.0%, Surti: 4.5%, Barbari: 4.0%, Pantja: 5.5%, Andamani: 3.6%, Sirohi (Field): 3.8%, Ganjam:3.9%, Jamunapari: 5.5%, Sirohi Farm: 3.7%, Ranged in different breed: (3-7.6%)
Litter Size / Kidding and Year	0.01 to 0.5 improvement/kidding 0.01 to 0.45 improvement/year	Barbari, Sangamneri, Black Bengal, Assam, Malabari, Surti, Andamani: 1.5 to 1.8/kidding & 2.01 to 2.85/year

Output	Outcomes	Achievements from 2021-22 to 2024-25
9-month body Weight Improvement	Breeds witnessed 2.05-27.66% increase at 9-month body weight	Black Bengal: 27.66%, Surti:15.66%, Sirohi Field: 11.09%, Assam Hill: 10.11%, Barbari: 9.07% Ranged in different breed: (2.05-27.66%)
90 days milk Yield Improvement	Many milch breeds witnessed >4.0 to 45% increase in milk yield	Surti: 45.82%, Sirohi: 29.57%, Sirohi Farm: 7.88%, Jamunapari: 6.77%, Ranged in different breed: (4.0-45.82%)

Pashmina Yield	Changthangi pashmina yield improved from 290 to 568 g	290g up to 568gm/Y
Survival Rate (Mortality)	Mortality reduced via breeding, strategic management and prophylactic support reduce from 7.69 to 57.14%	Osmanabadi: 57.14%, Assam Hill: 13.33%, Malabari: 17.94%, Pantja: 20.27% Ranged in different breed: (7.69-57.14%)

Output	Outcomes	Target Numbers	Achievements (2021-22 to 2024-25)
Breed Improvement & Conservation (No.)	Number of breed Conservation & Improvement program: Genotype improved, evaluated & converted to registered breed	Target: 18 breeds under AICRP Umbrella	24 breeds under AICRP (Present) • Genotype improved and registered as breed (Pantja, Andamani, Assam Hill, Himalayan, Bundelkhandi) • Prevented endangerment (dilution) in Jamunapari, Surti, Sangamneri, Jakhrana, Beetal, Barbari, Andamani
Development Of Farmer Participatory Breeding Structures (No.)	Sustainable community-based breeding system established	Target: 70 Clusters Village-490 Farmers-21450	Clusters- 74 Village-521 Farmers-31301
Total Goats Covered	Under Genetic Improvement	Target -95000	100260 (in project)
Goat Sold in a Calendar Year (All Units, Multiplier Flocks Etc.)	Profit	Target-45%	60156 (60%)
Total Number of Animal Covered (Direct & Indirect)	Enhanced reach and impact among farmer communities	Target-300000	400260 (100260_direct + 300000_indirect)
Performance Recording in Adopted Farmers Flock / MF (No.)	Establishment of data-driven selection protocols	Target: 65,000 goats / year	92000 / year
Capacity Building Program (No.)	Skill improvement	100 / year (500)	580
Farmers Benefitted (No.)	Capacity building, Technologies, Inputs supply, health support etc.	5000 / year (25000)	33760 (some farmers repeated over the years)
Women Farmer Trained (No.)	Empowerment of women	2000 / year (10000)	12713 (37.65%) - All Categories
SC Farmer Upliftment (No.)	Empowerment of SC community	560 / year (2800)	4690 (13.8%) (42.5% of total)
St Farmer Upliftment (No.)	Empowerment of ST community	710 / year (3550)	6744 (20% of total)
Employment Generated Including Indirect Beneficiaries (No.)	Empowerment generated (man days) @25goat/farmers	16010 / d / year	58.4 lakh man days / year
Selection Of Clusters & Farmers and doe Registration (No.)	Breed improvement and data recording etc.	10000 / year (50,000)	77732
Grading-Up Non-	Genetic improvement through selection	18000 / year	96000

Descript Goats (No.)		(100,000)	
Buck Distributed (No.) Field Units	Genetic Improvement & Breed conservation	300 / year (1500)	1577
In-Situ/Ex-Situ Conservation (No.) Semen Doses	Conservation of important breeds	2500 / year (12500)	17561
Technology Developed (No.)	Higher productivity & Profitability	05 / year (20)	32
Goat Sold Institute Nucleus Farm (No.)	Dissemination of elite male & female to farmers	500 / year (2500)	2703
Goats Sold Nucleus Flock of Field Units (No.)	Adoption and diffusion of improved goats	500 / year (2500)	3025
Goats Sold by Multiplier Flock (No.)	Increased access to quality breeding stock	900 / year (4500)	4350
Breeding Goats Sold by Adopted Farmers	Other Farmers breed improvement	10500 / year (52500)	50078
Multiplier Flock (No.)	Increased breeding base and availability of pedigreed goats	20 / year (100)	120
SHGs (No.)	Empowerment and capacity building of farmers	8 / year (40)	42
Health Camps (No.)	Awareness, improved health & reduced mortality	80 / year (400)	450
Preventive Health Care Measures (No.)	Improved animal health and reduced mortality (Vaccination +Deworming etc.)	100000 / year (500000)	582815
Research Publication (No.)	Number of Research Publication (>6.0 NAAS Rating)	25 / year (100)	175
No. of Thesis Awarded			11 Ph.D. + 20 MVSC
Success Stories			52 documented
Facilities Developed	Buck mother farm (nucleus flock) Semen Lab & Collection platform, Housing designs, Agro-forestry / horti-pastures, Frontline demonstration centers, Training Hall, Goat based integrated models, feeding trials, Molecular lab, shed for SC goat farmers, Renovation of existing sheds, Veterinary dispensary, Goat isolation shed, grain grinding (Mash & Pellet), Multiplier flock (seed unit), Equipment/farm appliances etc.		All the farm & field Units CIRG, CSWRI, GBPUA&T-Pantnagar, NARI, Phaltan, RCER, IVRI, KU-Navsari, RAJUVAS, CVS & AH Vallabhnagar, SKUAST-J&K
Research & Experiments	• Synthetic strains (exotics) → unsuitable for Indian conditions • Crossbreeding for meat → low productivity/profitability • Optimized reproductive & management practices for productivity, adaptability, survivability • Molecular markers identified for genomic selection • Dual-purpose sire lines (milk/meat) under development • Progeny testing in progress		
Livelihood & Extension (No.)	• Working in 90 tribal villages and harsh regions (Ladakh, HP, Uttarakhand, Rajasthan, A&N) • 15 entrepreneurship & goat-based integrated farming systems developed and adopted by >50000 farmers		

Outreach	• Support extended to state AH dept, state univ., Institutes, KVK's, NABARD, NLM, MANREGA, DBT, DST.NGOs, SHGs, start-ups, and entrepreneurs and farmers • Goat fairs, farmer–industry meets, capacity-building, workshops

7 (A). COMPARATIVE PERFORMANCE OF AICRP

Parameters	1993-97 (Base Year)	Previous EFC (2017-20)	Current EFC (2021-22 to 2024-25)
No. of Breed	5	15	24
No. of Unit/Centre	5	18	30
No. of Clusters	-	50	74
No. of Villages Covered	5	490	521
Goat Farmers Registered	3,000	56,000	1,00,260
Body weight Improvement	-	38% (15-38%) from base year	72% (32-72%) from base year 33.84% (12.7-33.84%) from 2017-20
Milk Yield Improvement	-	48.85 (15.0-48.85%) from base year	106% (22-106%) from base year 60.35% (25.0-60.35%) from 2017-20
Mortality (%)	10–18%	6–12%	2.1–7.6%
Strength of Nucleus Flock in Field units	0	20-50	100-150
Nucleus flock with field Units	0	8	15
Multiplier Flocks	0	18	120
Tribal Villages Covered	Nil	65	90
Farmers Benefited	5,500	22,500	33760
Technologies Developed	8	20	40
Capacity Building Programs	40	246	580

7 (B). UNIT-WISE ACTIVITIES & ACHIEVEMENTS

1. Barbari Goat Farm Unit

S.N.	Particular	Observations
1.	Population Size at Nucleus Flock	650
	Population with Multiplier Flocks	4100
2.	Multiplier Flock Established	04
3.	Animal Sold by Nucleus Flock	164
	Animal Sold by Multiplier Flock	514
4.	Litter Size in Nucleus Flock	1.58
	Litter Size in Multiplier Flock	1.61
5.	Buck Distribution	116
6.	Abortion in Nucleus Flock	0.79%
	Abortion in Multiplier Flock	1.80%
7.	Income / goat / year in Nucleus Flock	7500
	Income / goat / year in Multiplier Flock	4500-9000
8.	Infrastructure developed at Nucleus Flock	Sickward, Boundary wall, Tractor, goat shed, Agro-forestry
9.	Multiple Birth % in Nucleus Flock	66.6
	Multiple Birth % in Multiplier Flock	65
10.	Overall Mortality % at Nucleus Flock	3.6
	Overall Mortality % at Multiplier Flock	4.1
11.	Total Milk Yield / Lactation (TMY) in Nucleus Flock	139
	Total Milk Yield / Lactation (TMY) in Multiplier Flock	122
12.	Age First Kidding at Nucleus Flock (d)	586
	Age First Kidding at Farmers Flock (d)	535
13.	% Increase 9 Month body weight from base year	46
	% Increase 9 Month body weight from 2020-21	8.8
14.	% Increase Total Milk Yield (TMY) from base year	131
	% Increase Total Milk Yield (TMY) from 2020-21	2.5
15.	Non-descript goat upgraded (No.)	2250
16.	Training Organized (No.)	20
17.	Farmer Trained (No.)	1750
18.	Women Farmers Trained (No.)	130
19.	Health Camp (No.)	-
20.	Gosthi / Exposure visit (No.)	10
21.	Technology Developed (No.)	02
22.	Research Paper (No.)	05
23.	Lead Paper / Popular Articles (No.)	02
24.	Books / Book Chapter (No.)	01
25.	Success Stories (No.)	02
26.	No. of Clusters Developed	-
27.	Farmers obtained Animals	47
28.	Total Revenue generated (Lakh)	32.38

Barbari Goat Farm Unit



Nucleus Herd



Kids



Grazing Goats



Kids Eating Tree Leaves



Breeding Buck



Multiplier Flock

2. Jamunapari Goat Farm Unit

S.N.	Particular	Observations
1.	Population Size at Nucleus Flock	447
	Population with Multiplier Flocks	295
2.	Multiplier Flock Established	01
3.	Animal Sold by Nucleus Flock	78
	Animal Sold by Multiplier Flock	87
4.	Litter Size in Nucleus Flock	1.28
	Litter Size in Multiplier Flock	1.31
5.	Buck Distribution	43
6.	Abortion in Nucleus Flock	5.38
	Abortion in Multiplier Flock	-
7.	Income / goat / year in Nucleus Flock	18000
	Income / goat / year in Multiplier Flock	11000
8.	Infrastructure developed at Nucleus Flock	Bhusa Storage, Agro-forestry
9.	Multiple Birth % in Nucleus Flock	44
	Multiple Birth % in Multiplier Flock	39
10.	Overall Mortality % at Nucleus Flock	08
	Overall Mortality % at Multiplier Flock	12
11.	Total Milk Yield / Lactation (TMY) in Nucleus Flock	161
	Total Milk Yield / Lactation (TMY) in Multiplier Flock	146
12.	Age First Kidding at Nucleus Flock (d)	674
	Age First Kidding at Farmers Flock (d)	715
13.	% Increase 9 Month body weight from base year	30
	% Increase 9 Month body weight from 2020-21	9.5
14.	% Increase Total Milk Yield (TMY) from base year	103
	% Increase Total Milk Yield (TMY) from 2020-21	11.6
15.	Non-descript goat upgraded (No.)	450
16.	Training Organized (No.)	16
17.	Farmer Trained (No.)	1210
18.	Women Farmers Trained (No.)	204
19.	Health Camp (No.)	-
20.	Gosthi / Exposure visit (No.)	08
21.	Technology Developed (No.)	01
22.	Research Paper (No.)	03
23.	Lead Paper / Popular Articles (No.)	01
24.	Books / Book Chapter (No.)	01
25.	Success Stories (No.)	-
26.	No. of Clusters Developed	01
27.	Farmers obtained Animals	27
28.	Total Revenue generated (Lakh)	16.38

Jamunapari Goat Farm Unit



Breeding Doe



Breeding Buck



Nucleus Herd



Drinking Water



Kids Eating Tree Leaves



Breeding Bucks

3. Sirohi Farm Unit

S.N.	Particular	Observations
1.	Population Size at Nucleus Flock	516
	Population Size at Adopted Farmers (total of 18 farmers)	212
	Population Size at Multiplier Flock	-
2.	Multiplier Flock Established	02
3.	Animal Sold by Nucleus Flock	159
	Animal Sold by Famers	59
	Animal Sold by Multiplier Flock	-
4.	Litter Size in Nucleus Flock	1.14
	Litter Size in Farmers Flock	1.32
	Litter Size in Multiplier Flock	-
5.	Buck Distribution	10 (SCSP)
6.	No. of Abortion in Nucleus Flock	10
	No. of Abortion in Farmers Flock	08
	No. of Abortion in Multiplier Flock	-
7.	Income / goat / year in Nucleus Flock	-
	Income / goat / year in Farmers Flock	12434
	Income / goat / year in Multiplier Flock	-
8.	Infrastructure developed at Nucleus Flock	Renovated one feed storage cum working room
	Infrastructure developed at Farmers Flock	-
9.	Multiple Birth % in Nucleus Flock (% does with multiple birth)	16.19
	Multiple Birth % in Farmers Flock	-
	Multiple Birth % in Multiplier Flock	-
10.	Overall Mortality % at Nucleus Flock	3.69
	Overall Mortality % at Farmers Flock	12.26
	Overall Mortality % at Multiplier Flock	-
11.	Total Milk Yield (L) in Nucleus Flock	140.61
	Total Milk Yield (L) in Farmers Flock	-
12.	Age First Kidding at Nucleus Flock (d)	598.68
	Age First Kidding at Farmers Flock (d)	~405.0
13.	% Increase 9 Month body weight from base year	71.51%
	% Increase 9 Month body weight from 2020-21	3.41% (2023-24)
14.	% Increase Total Milk Yield (TMY) from base year	55.40%
	% Increase Total Milk Yield (TMY) from 2020-21	-9.89%
15.	Non-descript goat upgraded (No.)	-
16.	Training Organized (No.)	02
17.	Farmer Trained (No.)	30
18.	Women Farmers Trained (No.)	10
19.	Health Camp (No.)	-
20.	Gosthi / Exposure visit (No.)	01
21.	Technology Developed (No.)	01
22.	Research Paper (No.)	01
23.	Lead Paper / Popular Articles (No.)	-
24.	Books / Book Chapter (No.)	02
25.	Success Stories (No.)	-
26.	No. of Clusters Developed	-
27.	Farmers obtained Animals	-
28.	Total Revenue generated (Lakh)	26.34 lakh

Sirohi Farm Unit



Breeding Buck



Lactating Goat



Goat Kid Suckling Mother's Milk



Kids Eating Tree Leaves



Buck Leaps with Joy



Collection of Milk

4. Andamani Goat Field Unit

S.N.	Particular	Observations
1.	Population Size at Nucleus Flock	124
	Population Size at Adopted Farmers	4272
	Population Size at Multiplier Flock	318
2.	Multiplier Flock Established	02
3.	Animal Sold by Nucleus Flock	97
	Animal Sold by Famers	1492
	Animal Sold by Multiplier Flock	79
4.	Litter Size in Nucleus Flock	1.6
	Litter Size in Farmers Flock	1.52
	Litter Size in Multiplier Flock	1.53
5.	Buck Distribution	09
6.	No. of Abortion in Nucleus Flock	02
	No. of Abortion in Farmers Flock	23
	No. of Abortion in Multiplier Flock	06
7.	Income generation: per doe/ year in Nucleus Flock	11520
	Income generation: per doe/ year in Farmers Flock	10271
	Income generation: per doe/ year in Multiplier Flock	11016
8.	Infrastructure developed at Nucleus Flock	Modern goat shed, Solar system
	Infrastructure developed at Farmers Flock	Goat shed, and fencing to tribal farmers
9.	Multiple Birth % in Nucleus Flock	62.5
	Multiple Birth % in Farmers Flock	58.1
	Multiple Birth % in Multiplier Flock	55.5
11.	Overall Mortality % at Nucleus Flock	6.80
	Overall Mortality % at Farmers Flock	4.38
	Overall Mortality % at Multiplier Flock	3.80
12.	Total Milk Yield (L) in Nucleus Flock Total Milk Yield (L) in Farmers Flock	40.61
13.	Age First Kidding at Nucleus Flock (d)	392.0
	Age First Kidding at Farmers Flock (d)	392.8
14.	% Increase 9 Month body weight from base year	18.97%
	% Increase 9 Month body weight from 2020-21	8.7%
15.	% Increase Total Milk Yield (L) from base year	9.6%
	% Increase Total Milk Yield (L) from 2020-21	5.9%
16.	Non-descript goat upgraded (No.)	100
17.	Training Organized (No.)	14
18.	Farmers benefited (No.)	346
19.	Women Farmers Trained (No.)	169
20.	Health Camp (No.)	02
21.	Gosthi / Exposure visit (No.)	01/02
22.	Technology Developed (No.)	03
23.	Research Paper (No.)	02
24.	Lead Paper / Popular Articles (No.)	-
25.	Books / Book Chapter (No.)	-
26.	Success Stories (No.)	01
27.	Award / Recognition	-
28.	SHGs	-
29.	No. of Clusters	03
30.	No. of Villages	39

Andamani Goat Field Unit



Breeding Doe



Breeding Buck



Farmer Visit to CIARI Goat Unit



Dentition Goat Demonstration



National Goat Day with Input Distribution



Students Training

5. Assam Hill Goat Field Unit

S.N.	Particular	Observations
1.	Population Size at Nucleus Flock	176
	Population Size at Adopted Farmers	4996
	Population Size at Multiplier Flock	227
2.	Multiplier Flock Established	08
3.	Animal Sold by Nucleus Flock	10
	Animal Sold by Famers	651
	Animal Sold by Multiplier Flock	77
4.	Litter Size in Nucleus Flock	1.69
	Litter Size in Farmers Flock	1.67
	Litter Size in Multiplier Flock	1.63
5.	Buck Distribution	68
6.	No. of Abortion in Nucleus Flock	0
	No. of Abortion in Farmers Flock	07
	No. of Abortion in Multiplier Flock	0
7.	Income generation: per doe / year in Nucleus Flock	909.09
	Income generation: per doe / year in Farmers Flock	3723
	Income generation: per doe / year in Multiplier Flock	4297
8.	Infrastructure developed at Nucleus Flock	1 Goat Shed
	Infrastructure developed at Farmers Flock	-
9.	Multiple Birth % in Nucleus Flock	62.06
	Multiple Birth % in Farmers Flock	51.68
	Multiple Birth % in Multiplier Flock	57.60
11.	Overall Mortality % at Nucleus Flock	2.30
	Overall Mortality % at Farmers Flock	5.28
	Overall Mortality % at Multiplier Flock	2.88
12.	Total Milk Yield (L) in Nucleus Flock	14.10 (90 days)
	Total Milk Yield (L) in Farmers Flock	12.78 (90 days)
13.	Age First Kidding at Nucleus Flock (d)	392.8
	Age First Kidding at Farmers Flock (d)	402.17
14.	% Increase 9 Month body weight from base year	22.5
	% Increase 9 Month body weight from 2020-21	10.11
15.	% Increase Total Milk Yield (L) from base year	-
	% Increase Total Milk Yield (L) from 2020-21	-
16.	Non-descript goat upgraded (No.)	426
17.	Training Organized (No.)	20
18.	Farmers benefited (No.)	735
19.	Women Farmers Trained (No.)	682
20.	Health Camp (No.)	25
21.	Gosthi / Exposure visit (No.)	37
22.	Technology Developed (No.)	05
23.	Research Paper (No.)	04
24.	Lead Paper / Popular Articles (No.)	03
25.	Books / Book Chapter (No.)	03
26.	Success Stories (No.)	04
27.	Award / Recognition	06
28.	SHGs	-
29.	No. of Clusters	05
30.	No. of Villages	25

Assam Hill Goat Field Unit



Breeding Doe



Breeding Buck



Multiplier Flock



Nucleus Herd



Kids



Kid

6. Black Bengal Goat Field Unit

S.N.	Particular	Observations
1.	Population Size at Nucleus Flock	117
	Population Size at Adopted Farmers	4766
	Population Size at Multiplier Flock	199
2.	Multiplier Flock Established	05
3.	Animal Sold by Nucleus Flock	46
	Animal Sold by Famers	2750
	Animal Sold by Multiplier Flock	142
4.	Litter Size in Nucleus Flock	1.45
	Litter Size in Farmers Flock	1.79
	Litter Size in Multiplier Flock	2.10
5.	Buck Distribution	37
6.	No. of Abortion in Nucleus Flock	02
	No. of Abortion in Farmers Flock	22
	No. of Abortion in Multiplier Flock	04
7.	Income generation: per doe / year in Nucleus Flock	-
	Income generation: per doe / year in Farmers Flock	2560
	Income generation: per doe / year in Multiplier Flock	2780
8.	Infrastructure developed at Nucleus Flock	1(goat isolation shed)
	Infrastructure developed at Farmers Flock	0
9.	Multiple Birth % in Nucleus Flock	45.0
	Multiple Birth % in Farmers Flock	56.62
	Multiple Birth % in Multiplier Flock	55.0
11.	Overall Mortality % at Nucleus Flock	4.65
	Overall Mortality % at Farmers Flock	4.08
	Overall Mortality % at Multiplier Flock	4.90
12.	Total Milk Yield (L) in Nucleus Flock	26.26
	Total Milk Yield (L) in Farmers Flock	23.35
13.	Age First Kidding at Nucleus Flock (d)	434.16
	Age First Kidding at Farmers Flock (d)	432.86
14.	% Increase 9 Month body weight from base year	41.27
	% Increase 9 Month body weight from 2020-21	28.28
15.	% Increase Total Milk Yield (L) from base year	24.4
	% Increase Total Milk Yield (L) from 2020-21	5.03
16.	Non-descript goat upgraded (No.)	1412
17.	Training Organized (No.)	03
18.	Farmers benefited (No.)	110
19.	Women Farmers Trained (No.)	89
20.	Health Camp (No.)	10
21.	Gosthi / Exposure visit (No.)	13
22.	Technology Developed (No.)	01
23.	Research Paper (No.)	-
24.	Lead Paper / Popular Articles (No.)	01
25.	Books / Book Chapter (No.)	-
26.	Success Stories (No.)	-
27.	Award / Recognition	02
28.	SHGs	-
29.	No. of Clusters	04
30.	No. of Villages	04

Black Bengal Goat Field Unit



Breeding Doe



Breeding Buck



Input and Buck Distribution



Grazing Goats



Health Camp



Buck Distribution

7. Beetal Goat Field Unit

S.N.	Particular	Observations
1.	Population Size at Nucleus Flock	149
	Population Size at Adopted Farmers	3597
	Population Size at Multiplier Flock	72
2.	Multiplier Flock Established	01
3.	Animal Sold by Nucleus Flock	57
	Animal Sold by Famers	1493
	Animal Sold by Multiplier Flock	55
4.	Litter Size in Nucleus Flock	1.9
	Litter Size in Farmers Flock	1.45
	Litter Size in Multiplier Flock	1.56
5.	Buck Distribution	23
6.	No. of Abortion in Nucleus Flock	-
	No. of Abortion in Farmers Flock	07
	No. of Abortion in Multiplier Flock	-
7.	Income / goat / year in Nucleus Flock	10,321
	Income / goat / year in Farmers Flock	15,000
	Income / goat / year in Multiplier Flock	26,500
8.	Infrastructure developed at Nucleus Flock	-
	Infrastructure developed at Farmers Flock	-
9.	Multiple Birth % in Nucleus Flock	79%
	Multiple Birth % in Farmers Flock	50%
	Multiple Birth % in Multiplier Flock	55%
11.	Overall Mortality % at Nucleus Flock	9.7%
	Overall Mortality % at Farmers Flock	7%
	Overall Mortality % at Multiplier Flock	3.56%
12.	Total Milk Yield (L) in Nucleus Flock	92.77 kg/ goat
	Total Milk Yield (L) in Farmers Flock	
13.	Age First Kidding at Nucleus Flock (d)	24.4 months
	Age First Kidding at Farmers Flock (d)	737.93± 24
14.	% Increase 9 Month body weight from base year	-
	% Increase 9 Month body weight from 2020-21	-
15.	% Increase Total Milk Yield (L) from base year	-
	% Increase Total Milk Yield (L) from 2020-21	-
16.	Non-descript goat upgraded (No.)	35
17.	Training Organized (No.)	07
18.	Farmers benefited (No.)	147
19.	Women Farmers Trained (No.)	-
20.	Health Camp (No.)	01
21.	Gosthi / Exposure visit (No.)	12
22.	Technology Developed (No.)	-
23.	Research Paper (No.)	01
24.	Lead Paper / Popular Articles (No.)	10
25.	Books / Book Chapter (No.)	-
26.	Success Stories (No.)	01
27.	Award / Recognition	-
28.	SHGs / FIG	01
29.	No. of Clusters	04
30.	No. of Villages	39

Beetal Goat Field Unit



Breeding Buck



One Day Workshop



Goat Mela



Input Distribution



Interaction with Farmer



Data Recording

8. Bundelkhandi Goat Field Unit

S.N.	Particular	Observations
1.	Population Size at Nucleus Flock	102
	Population Size at Adopted Farmers	3812
	Population Size at Multiplier Flock	339
2.	Multiplier Flock Established	05
3.	Animal Sold by Nucleus Flock	12
	Animal Sold by Famers	924
	Animal Sold by Multiplier Flock	57
4.	Litter Size in Nucleus Flock	1.34
	Litter Size in Farmers Flock	1.22
	Litter Size in Multiplier Flock	
5.	Buck Distribution	21
6.	No. of Abortion in Nucleus Flock	-
	No. of Abortion in Farmers Flock	-
	No. of Abortion in Multiplier Flock	-
7.	Income generation: per doe / year in Nucleus Flock	-
	Income generation: per doe / year in Farmers Flock	-
	Income generation: per doe / year in Multiplier Flock	-
8.	Infrastructure developed at Nucleus Flock	Quarantine shed
	Infrastructure developed at Farmers Flock	-
9.	Multiple Birth % in Nucleus Flock	34.09
	Multiple Birth % in Farmers Flock	22.45
	Multiple Birth % in Multiplier Flock	
11.	Overall Mortality % at Nucleus Flock	12.13
	Overall Mortality % at Farmers Flock	8.31
	Overall Mortality % at Multiplier Flock	6.60
12.	Total Milk Yield (L) in Nucleus Flock	54.3 litre
	Total Milk Yield (L) in Farmers Flock	50.8 litre
13.	Age First Kidding at Nucleus Flock (d)	545.2 days
	Age First Kidding at Farmers Flock (d)	-
14.	% Increase 9 Month body weight from base year	7.6
	% Increase 9 Month body weight from 2020-21	2.6
15.	% Increase Total Milk Yield (L) from base year	-
	% Increase Total Milk Yield (L) from from 2020-21	6.8
16.	Non-descript goat upgraded (No.)	-
17.	Training Organized (No.)	03
18.	Farmers benefited (No.)	271
19.	Women Farmers Trained (No.)	21
20.	Health Camp (No.)	03
21.	Gosthi / Exposure visit (No.)	03
22.	Technology Developed (No.)	-
23.	Research Paper (No.)	01
24.	Lead Paper / Popular Articles (No.)	-
25.	Books / Book Chapter (No.)	-
26.	Success Stories (No.)	01
27.	Award / Recognition	-
28.	SHGs	-
29.	No. of Clusters	03
30.	No. of Villages	06

Bundelkhandi Goat Field Unit



Breeding Doe



Breeding Buck



Interaction with Farmers



Buck Distribution



Awareness Programme & Medicines Distribution



Farmer Flock

9. Changthangi Goat Field Unit

S.N.	Particular	Observations
1.	Population Size at Nucleus Flock	95
	Population Size at Adopted Farmers	26284
	Population Size at Multiplier Flock	-
2.	Multiplier Flock Established	-
3.	Animal Sold by Nucleus Flock	-
	Animal Sold by Famers	1171
	Animal Sold by Multiplier Flock	-
4.	Litter Size in Nucleus Flock	01
	Litter Size in Farmers Flock	01
	Litter Size in Multiplier Flock	-
5.	Buck Distribution	12
6.	No. of Abortion in Nucleus Flock	02
	No. of Abortion in Farmers Flock	238
	No. of Abortion in Multiplier Flock	-
7.	Income generation: per doe / year in Nucleus Flock	700
	Income generation: per doe / year in Farmers Flock	1000-2000
	Income generation: per doe / year in Multiplier Flock	-
8.	Infrastructure developed at Nucleus Flock	Renovation of Lab and Shed
	Infrastructure developed at Farmers Flock	-
9.	Multiple Birth % in Nucleus Flock	-
	Multiple Birth % in Farmers Flock	0.1%
	Multiple Birth % in Multiplier Flock	-
11.	Overall Mortality % at Nucleus Flock	3.2%
	Overall Mortality % at Farmers Flock	11.29%
	Overall Mortality % at Multiplier Flock	-
12.	Total Milk Yield (L) in Nucleus Flock	70ml per doe per day
	Total Milk Yield (L) in Farmers Flock	70-90ml
13.	Age First Kidding at Nucleus Flock (d)	558 days
	Age First Kidding at Farmers Flock (d)	602 days
14.	% Increase 9 Month body weight from base year	1.5%
	% Increase 9 Month body weight from 2020-21	2.7%
15.	% Increase Total Milk Yield (L) from base year	-
	% Increase Total Milk Yield (L) from 2020-21	-
16.	Non-descript goat upgraded (No.)	-
17.	Training Organized (No.)	16
18.	Farmers benefited (No.)	190
19.	Women Farmers Trained (No.)	65
20.	Health Camp (No.)	16
21.	Gosthi / Exposure visit (No.)	-
22.	Technology Developed (No.)	02
23.	Research Paper (No.)	-
24.	Lead Paper / Popular Articles (No.)	02
25.	Books / Book Chapter (No.)	-
26.	Success Stories (No.)	02
27.	Award / Recognition	-
28.	SHGs	05
29.	No. of Clusters	09
30.	No. of Villages	09

Changthangi Goat Field Unit



Distribution of Feed and Bucks



Nucleus Flock



Facilation of Best Farmer by DDG AS



Data Recording



Improvement in Kid Mortality



Health Monitoring

10. Gaddi Goat Field Unit

S.N.	Particular	Observations
1.	Population Size at Nucleus Flock	41
	Population Size at Adopted Farmers	4882
	Population Size at Multiplier Flock	951
2.	Multiplier Flock Established	02
3.	Animal Sold by Nucleus Flock	04
	Animal Sold by Farmers	597
	Animal Sold by Multiplier Flock	210
4.	Litter Size in Nucleus Flock	1.20
	Litter Size in Farmers Flock	1.42
	Litter Size in Multiplier Flock	1.40
5.	Buck Distribution	13
6	No. of Abortions in Nucleus Flock	0
	No. of Abortions in Farmers Flock	56
	No. of Abortions in Multiplier Flock	13
7.	Income / goat / year in Nucleus Flock	5095
	Income / goat / year in Farmers Flock	5095
	Income / goat / year in Multiplier Flock	5095
8.	Infrastructure developed at Nucleus Flock	01 (Buck Shed phase 1)
	Infrastructure developed at Farmers Flock	-
9.	Multiple Birth % in Nucleus Flock	0
	Multiple Birth % in Farmers Flock	11.6
	Multiple Birth % in Multiplier Flock	8.5
10.	Overall Mortality % at Nucleus Flock	13.63
	Overall Mortality % at Farmers Flock	6.74
	Overall Mortality % at Multiplier Flock	6.40
11.	Total Milk Yield (L) in Nucleus Flock	NA
	Total Milk Yield (L) in Farmers Flock	NA
12.	Age First Kidding at Nucleus Flock	22 months
	Age First Kidding at Farmers Flock	20 months
13.	% increase 9-month body weight from base year	22%
	% increase 9-month body weight from 2020-21	4.43%
14.	% increase Total Milk Yield (L) from base year	NA
	% increase Total Milk Yield (L) from 2020-21	NA
15.	Non-descript goat upgraded (No.)	-
16.	Training Organized (No.)	03
17.	Farmers benefited (No.)	30
18.	Women Farmers Trained (No.)	0
19.	Health Camp (No.)	06
20.	Gosthi / Exposure visit (No.)	11
21.	Technology Developed (No.)	0
22.	Research Paper (No.)	04
23.	Lead Paper / Popular Articles (No.)	0
24.	Books / Book Chapter (No.)	02
25.	Success Stories (No.)	0
26.	Award / Recognition	0
27.	SHGs	0
28.	No. of Clusters	05
29.	No. of Villages	18

Gaddi Goat Field Unit



Multiplier Flock



Elite Buck



Vaccination of Goats



Weighing of Goats



Housing for Kids



Dipping of Goats

11. Ganjam Goat Field Unit

S.N.	Particular	Observations
1.	Population Size at Nucleus Flock	-
	Population Size at Adopted Farmers	2775
	Population Size at Multiplier Flock	-
2.	Multiplier Flock Established	-
3.	Animal Sold by Nucleus Flock	-
	Animal Sold by Famers	847
	Animal Sold by Multiplier Flock	-
4.	Litter Size in Nucleus Flock	-
	Litter Size in Farmers Flock	1.0
	Litter Size in Multiplier Flock	-
5.	Buck Distribution	57
6.	No. of Abortion in Nucleus Flock	-
	No. of Abortion in Farmers Flock	03
	No. of Abortion in Multiplier Flock	-
7.	Income generation: per doe / year in Nucleus Flock	-
	Income generation: per doe / year in Farmers Flock	5393
	Income generation: per doe / year in Multiplier Flock	-
8.	Infrastructure developed at Nucleus Flock	-
	Infrastructure developed at Farmers Flock	-
9.	Multiple Birth % in Nucleus Flock	-
	Multiple Birth % in Farmers Flock	-
	Multiple Birth % in Multiplier Flock	-
11.	Overall Mortality % at Nucleus Flock	-
	Overall Mortality % at Farmers Flock	5.9
	Overall Mortality % at Multiplier Flock	-
12.	Total Milk Yield (L) in Nucleus Flock	-
	Total Milk Yield (L) in Farmers Flock	15.17
13.	Age First Kidding at Nucleus Flock (d)	-
	Age First Kidding at Farmers Flock (d)	599
14.	% Increase 9 Month body weight from base year	3.27
	% Increase 9 Month body weight from 2020-21	0.87
15.	% Increase Total Milk Yield (L) from base year	-
	% Increase Total Milk Yield (L) from 2020-21	0.98
16.	Non-descript goat upgraded (No.)	-
17.	Training Organized (No.)	11
18.	Farmers benefited (No.)	252
19.	Women Farmers Trained (No.)	89
20.	Health Camp (No.)	12
21.	Gosthi / Exposure visit (No.)	02
22.	Technology Developed (No.)	-
23.	Research Paper (No.)	04
24.	Lead Paper / Popular Articles (No.)	-
25.	Books / Book Chapter (No.)	-
26.	Success Stories (No.)	02
27.	Award / Recognition	02
28.	SHGs	-
29.	No. of Clusters	04
30.	No. of Villages	28

Ganjam Goat Field Unit



Castration



Breeding Buck



Doe with Kid



Distribution of Concentrate Feed



Health Camp

12. Chaugarkha Goat Field Unit

S.N.	Particular	Observations
1.	Population Size at Nucleus Flock	225
	Population Size at Adopted Farmers	845
	Population Size at Multiplier Flock	81
2.	Multiplier Flock Established	05
3.	Animal Sold by Nucleus Flock	20
	Animal Sold by Famers	130
	Animal Sold by Multiplier Flock	8
4.	Litter Size in Nucleus Flock	1.51
	Litter Size in Farmers Flock	1.18
	Litter Size in Multiplier Flock	1.17
5.	Buck Distribution	07
6.	No. of Abortion in Nucleus Flock	02
	No. of Abortion in Farmers Flock	03
	No. of Abortion in Multiplier Flock	-
7.	Income / goat / year in Nucleus Flock	-
	Income / goat / year in Farmers Flock	-
	Income / goat / year in Multiplier Flock	-
8.	Infrastructure developed at Nucleus Flock	01 manure pit, repair of goat sheds
	Infrastructure developed at Farmers Flock	-
9.	Multiple Birth % in Nucleus Flock	48.65
	Multiple Birth % in Farmers Flock	18.40
	Multiple Birth % in Multiplier Flock	17.32
11.	Overall Mortality % at Nucleus Flock	11.11
	Overall Mortality % at Farmers Flock	3.89
	Overall Mortality % at Multiplier Flock	4.37
12.	Total Milk Yield (L) in Nucleus Flock	36.34
	Total Milk Yield (L) in Farmers Flock	21.26
13.	Age First Kidding at Nucleus Flock (d)	-
	Age First Kidding at Farmers Flock (d)	-
14.	% Increase 9 Month body weight from base year	7.65 %
	% Increase 9 Month body weight from 2020-21	4.40 %
15.	% Increase Total Milk Yield (L) from base year	-
	% Increase Total Milk Yield (L) from 2020-21	-
16.	Non-descript goat upgraded (No.)	102
17.	Training Organized (No.)	01
18.	Farmers benefited (No.)	260
19.	Women Farmers Trained (No.)	-
20.	Health Camp (No.)	03
21.	Gosthi / Exposure visit (No.)	01
22.	Technology Developed (No.)	-
23.	Research Paper (No.)	-
24.	Lead Paper / Popular Articles (No.)	-
25.	Books / Book Chapter (No.)	01
26.	Success Stories (No.)	01
27.	Award / Recognition	-
28.	SHGs	-
29.	No. of Clusters	04
30.	No. of Villages	04

Chaugarkha Goat Field Unit



Breeding Buck



Breeding Doe



Grazing Goats



Certificate Distribution



Training Inaugural



Visit of PC Incharge & Team

13. Malabari Goat Field Unit

S.N.	Particular	Observations
1.	Population Size at Nucleus Flock	129
	Population Size at Adopted Farmers	4699
	Population Size at Multiplier Flock	384
2.	Multiplier Flock Established	05
3.	Animal Sold by Nucleus Flock	63
	Animal Sold by Famers	1073
	Animal Sold by Multiplier Flock	134
4.	Litter Size in Nucleus Flock	1.72
	Litter Size in Farmers Flock	1.68
	Litter Size in Multiplier Flock	1.70
5.	Buck Distribution	73
6.	No. of Abortion in Nucleus Flock	02
	No. of Abortion in Farmers Flock	05
	No. of Abortion in Multiplier Flock	01
7.	Income / goat / year in Nucleus Flock	16500
	Income / goat / year in Farmers Flock	16560
	Income / goat / year in Multiplier Flock	16560
8.	Infrastructure developed at Nucleus Flock	400 sq. ft. slatted floor shed
	Infrastructure developed at Farmers Flock	388 sq. ft. slatted floor shed
9.	Multiple Birth % in Nucleus Flock	56.5
	Multiple Birth % in Farmers Flock	55.0
	Multiple Birth % in Multiplier Flock	54.5
11.	Overall Mortality % at Nucleus Flock	4.2
	Overall Mortality % at Farmers Flock	3.1
	Overall Mortality % at Multiplier Flock	4.1
12.	Total Milk Yield (L) in Nucleus Flock	84.60
	Total Milk Yield (L) in Farmers Flock	80.60
13.	Age First Kidding at Nucleus Flock (d)	390.20
	Age First Kidding at Farmers Flock (d)	395.10
14.	% Increase 9 Month body weight from base year	66.45
	% Increase 9 Month body weight from 2020-21	2.06
15.	% Increase Total Milk Yield (L) from base year	68.75
	% Increase Total Milk Yield (L) from 2020-21	4.08
16.	Non-descript goat upgraded (No.)	237
17.	Training Organized (No.)	08
18.	Farmers benefited (No.)	509
19.	Women Farmers Trained (No.)	256
20.	Health Camp (No.)	06
21.	Gosthi / Exposure visit (No.)	50
22.	Technology Developed (No.)	02
23.	Research Paper (No.)	05
24.	Lead Paper / Popular Articles (No.)	02+01
25.	Books / Book Chapter (No.)	01
26.	Success Stories (No.)	02
27.	Award / Recognition	07
28.	SHGs	08
29.	No. of Clusters	06
30.	No. of Villages	32

Malabari Goat Field Unit



Malabari Doe



Malabari Buck



Vaccination of Goats



Expossure Visit



Buck and Input Distribution



Farmers Training

14. Marwari Goat Field Unit

S.N.	Particular	Observations
1.	Population Size at Nucleus Flock	177
	Population Size at Adopted Farmers	4117
	Population Size at Multiplier Flock	80
2.	Multiplier Flock Established	02
3.	Animal Sold by Nucleus Flock	19
	Animal Sold by Famers	-
	Animal Sold by Multiplier Flock	-
4.	Litter Size in Nucleus Flock	1.05
	Litter Size in Farmers Flock	1.03
	Litter Size in Multiplier Flock	1.04
5.	Buck Distribution	21
6.	No. of Abortion in Nucleus Flock	-
	No. of Abortion in Farmers Flock	27
	No. of Abortion in Multiplier Flock	-
7.	Income / goat / year in Nucleus Flock	-
	Income / goat / year in Farmers Flock	3631
	Income / goat / year in Multiplier Flock	3751
8.	Infrastructure developed at Nucleus Flock	sheds
	Infrastructure developed at Farmers Flock	-
9.	Multiple Birth % in Nucleus Flock	14.5
	Multiple Birth % in Farmers Flock	13.0
	Multiple Birth % in Multiplier Flock	13.5
11.	Overall Mortality % at Nucleus Flock	3.10
	Overall Mortality % at Farmers Flock	3.56
	Overall Mortality % at Multiplier Flock	3.51
12.	Total Milk Yield (L) in Nucleus Flock	-
	Total Milk Yield (L) in Farmers Flock	90.15
13.	Age First Kidding at Nucleus Flock	19 months
	Age First Kidding at Farmers Flock	20 months
14.	% Increase 9 Month body weight from base year	-
	% Increase 9 Month body weight from 2020-21	3.9%
15.	% Increase Total Milk Yield (L) from base year	-
	% Increase Total Milk Yield (L) from 2020-21	-2.1%
16.	Non-descript goat upgraded (No.)	250
17.	Training Organized (No.)	04
18.	Farmers benefited (No.)	107
19.	Women Farmers Trained (No.)	10
20.	Health Camp (No.)	02
21.	Gosthi / Exposure visit (No.)	05
22.	Technology Developed (No.)	-
23.	Research Paper (No.)	-
24.	Lead Paper / Popular Articles (No.)	-
25.	Books / Book Chapter (No.)	-
26.	Success Stories (No.)	01
27.	Award / Recognition	-
28.	SHGs	-
29.	No. of Clusters	04
30.	No. of Villages	07

Marwari Goat Field Unit



Breeding Buck



Farmers Training



Breeding Buck



Nucleus Herd



Grazing Goats



Migratory Goats

15. Osmanabadi Goat Field Unit

S.N.	Particular	Observations
1.	Population Size at Nucleus Flock	157
	Population Size at Adopted Farmers	1259
	Population Size at Multiplier Flock	197
2.	Multiplier Flock Established	17
3.	Animal Sold by Nucleus Flock	61
	Animal Sold by Famers	1179
	Animal Sold by Multiplier Flock	79
4.	Litter Size in Nucleus Flock	1.68
	Litter Size in Farmers Flock	1.63
	Litter Size in Multiplier Flock	1.52
5.	Buck Distribution	33
6.	No. of Abortion in Nucleus Flock	04
	No. of Abortion in Farmers Flock	21
	No. of Abortion in Multiplier Flock	07
7.	Income / goat / year in Nucleus Flock	12650
	Income / goat / year in Farmers Flock	11550
	Income / goat / year in Multiplier Flock	-
8.	Infrastructure developed at Nucleus Flock	*see below
	Infrastructure developed at Farmers Flock	**see below
9.	Multiple Birth % in Nucleus Flock	59.2
	Multiple Birth % in Farmers Flock	61.7
	Multiple Birth % in Multiplier Flock	57.0
11.	Overall Mortality % at Nucleus Flock	1.9
	Overall Mortality % at Farmers Flock	0.5
	Overall Mortality % at Multiplier Flock	2.0
12.	Total Milk Yield (L) in Nucleus Flock	-
	Total Milk Yield (L) in Farmers Flock	-
13.	Age First Kidding at Nucleus Flock (d)	-
	Age First Kidding at Farmers Flock (d)	450
14.	% Increase 9 Month body weight from base year (2010)	14%
	% Increase 9 Month body weight from 2020-21	4%
15.	% Increase Total Milk Yield (L) from base year	-
	% Increase Total Milk Yield (L) from 2020-21	-
16.	Non-descript goat upgraded (No.)	2500
17.	Training Organized (No.)	24
18.	Farmers benefited (No.)	2521
19.	Women Farmers Trained (No.)	225
20.	Health Camp (No.)	27
21.	Gosthi / Exposure visit (No.)	70
22.	Technology Developed (No.)	07
23.	Research Paper (No.)	02
24.	Lead Paper / Popular Articles (No.)	05
25.	Books / Book Chapter (No.)	-
26.	Success Stories (No.)	05
27.	Award / Recognition	03
28.	SHGs	-
29.	No. of Clusters	05
30.	No. of Villages	08

*Infrastructure developed at NARI farm: 2024-25: Repairs and maintenance of buck pens, repairing leaking watering troughs in buck pens and painting of roof and grills, constructing a shower for washing of bucks
Last 5 years: Constructed a shed measuring 80' X 28' with individual pens for 20 Osmanabadi bucks with PCC flooring and individual feeders and watering troughs
**Infrastructure developed at farmers' flocks:2024-25: Constructed 3 sheds for the goats of 1 SC goat keeper in Rajale, Tal. Phaltan, Dist. Satara and 2 SC goat keepers in Sakat, Tal. Jamkhed, Dist. Ahmednagar.

Osmanabadi Goat Field Unit



Breeding Buck



Breeding Doe



Farmer's Flock



Kid Suckling Mother's Milk



Vaccination of Goats



Data Recording

16. Pantja Goat Field Unit

S.N.	Particular	Observations
1.	Population Size at Nucleus Flock	89
	Population Size at Adopted Farmers	4525
	Population Size at Multiplier Flock	845
2.	Multiplier Flock Established	05
3.	Animal Sold by Nucleus Flock	-
	Animal Sold by Famers	628
	Animal Sold by Multiplier Flock	501
4.	Litter Size in Nucleus Flock	1.62
	Litter Size in Farmers Flock	1.58
	Litter Size in Multiplier Flock	1.60
5.	Buck Distribution	22
6.	No. of Abortion in Nucleus Flock	01
	No. of Abortion in Farmers Flock	42
	No. of Abortion in Multiplier Flock	11
7.	Income / goat / year in Nucleus Flock	-
	Income / goat / year in Farmers Flock	10250
	Income / goat / year in Multiplier Flock	10450
8.	Infrastructure developed at Nucleus Flock	01
	Infrastructure developed at Farmers Flock	-
9.	Multiple Birth % in Nucleus Flock	58.82
	Multiple Birth % in Farmers Flock	53.21
	Multiple Birth % in Multiplier Flock	56.84
11.	Overall Mortality % at Nucleus Flock	6.74
	Overall Mortality % at Farmers Flock	6.03
	Overall Mortality % at Multiplier Flock	5.56
12.	Total Milk Yield (L) in Nucleus Flock	-
	Total Milk Yield (L) in Farmers Flock	61.34
13.	Age First Kidding at Nucleus Flock (d)	-
	Age First Kidding at Farmers Flock (d)	418.84
14.	% Increase 9 Month body weight from base year	23.64
	% Increase 9 Month body weight from 2020-21	5.59
15.	% Increase Total Milk Yield (L) from base year	7.92
	% Increase Total Milk Yield (L) from 2020-21	4.23
16.	Non-descript goat upgraded (No.)	342
17.	Training Organized (No.)	07
18.	Farmers benefited (No.)	348
19.	Women Farmers Trained (No.)	170
20.	Health Camp (No.)	49
21.	Gosthi / Exposure visit (No.)	49
22.	Technology Developed (No.)	-
23.	Research Paper (No.)	41
24.	Lead Paper / Popular Articles (No.)	-
25.	Books / Book Chapter (No.)	03
26.	Success Stories (No.)	01
27.	Award / Recognition	01
28.	SHGs	04
29.	No. of Clusters	04
30.	No. of Villages	85

Pantja Goat Field Unit



Vaccination of Goats



Deworming of Goats



Buck Distribution



Castration



Input Distribution



Farmers Training

17. Sangamneri Goat Field Unit

S.N.	Particular	Observations
1.	Population Size at Nucleus Flock	166
	Population Size at Adopted Farmers	11924
	Population Size at Multiplier Flock	151
2.	Multiplier Flock Established	01
3.	Animal Sold by Nucleus Flock	-
	Animal Sold by Famers	637
	Animal Sold by Multiplier Flock	34
4.	Litter Size in Nucleus Flock	1.35
	Litter Size in Farmers Flock	1.78
	Litter Size in Multiplier Flock	1.85
5.	Buck Distribution	51
6.	No. of Abortion in Nucleus Flock	02
	No. of Abortion in Farmers Flock	32
	No. of Abortion in Multiplier Flock	03
7.	Income / goat / year in Nucleus Flock	-
	Income / goat / year in Farmers Flock	5200
	Income / goat / year in Multiplier Flock	5200
8.	Infrastructure developed at Nucleus Flock	-
	Infrastructure developed at Farmers Flock	-
9.	Multiple Birth % in Nucleus Flock	24.46
	Multiple Birth % in Farmers Flock	66.64
	Multiple Birth % in Multiplier Flock	68.12
11.	Overall Mortality% at Nucleus Flock	0.98
	Overall Mortality% at Farmers Flock	1.26
	Overall Mortality% at Multiplier Flock	1.12
12.	Total Milk Yield (L) in Nucleus Flock	-
	Total Milk Yield (L) in Farmers Flock	120.45
13.	Age First Kidding at Nucleus Flock (d)	-
	Age First Kidding at Farmers Flock (d)	436.89
14.	% Increase 9 Month body weight from base year	18.58
	% Increase 9 Month body weight from 2020-21	0.03
15.	% Increase Total Milk Yield (L) from base year	92.01
	% Increase Total Milk Yield (L) from 2020-21	-1.27
16.	Non-descript goat upgraded (No.)	-
17.	Training Organized (No.)	09
18.	Farmers benefited (No.)	650
19.	Women Farmers Trained (No.)	150
20.	Health Camp (No.)	02
21.	Gosthi / Exposure visit (No.)	29
22.	Technology Developed (No.)	-
23.	Research Paper (No.)	01
24.	Lead Paper / Popular Articles (No.)	02
25.	Books / Book Chapter (No.)	01
26.	Success Stories (No.)	02
27.	Award / Recognition	-
28.	SHGs	01
29.	No. of Clusters	05
30.	No. of Villages	62

Sangamneri Goat Field Unit



PC Incharge Visit



Farmers Training



SCSP Training



Buck Distribution



Womens Training



PC Incharge Visit

18. Sirohi Goat Field Unit

S.N.	Particular	Observations
1.	Population Size at Nucleus Flock	256
	Population Size at Adopted Farmers	2576
	Population Size at Multiplier Flock	113
2.	Multiplier Flock Established	04
3.	Animal Sold by Nucleus Flock	35
	Animal Sold by Famers	657
	Animal Sold by Multiplier Flock	227
4.	Litter Size in Nucleus Flock	1.25
	Litter Size in Farmers Flock	1.28
	Litter Size in Multiplier Flock	1.26
5.	Buck Distribution	60
6.	No. of Abortion in Nucleus Flock	05
	No. of Abortion in Farmers Flock	66
	No. of Abortion in Multiplier Flock	02
7.	Income / goat / year in Nucleus Flock	12,650
	Income / goat / year in Farmers Flock	11,550
	Income / goat / year in Multiplier Flock	-
8.	Infrastructure developed at Nucleus Flock	Renovation of Shed
	Infrastructure developed at Farmers Flock	-
9.	Multiple Birth % in Nucleus Flock	16.26
	Multiple Birth % in Farmers Flock	29.67
	Multiple Birth % in Multiplier Flock	21.05
11.	Overall Mortality % at Nucleus Flock	4.95
	Overall Mortality % at Farmers Flock	4.80
	Overall Mortality % at Multiplier Flock	5.00
12.	Total Milk Yield (L) in Nucleus Flock	85.64
	Total Milk Yield (L) in Farmers Flock	80.30
13.	Age First Kidding at Nucleus Flock (d)	634
	Age First Kidding at Farmers Flock (d)	-
14.	% Increase 9 Month body weight from base year	19.41
	% Increase 9 Month body weight from 2020-21	11.08
15.	% Increase Total Milk Yield (L) from base year	72.0
	% Increase Total Milk Yield (L) from 2020-21	10.44
16.	Non-descript goat upgraded (No.)	503
17.	Training Organized (No.)	04
18.	Farmers benefited (No.)	74
19.	Women Farmers Trained (No.)	03
20.	Health Camp (No.)	03
21.	Gosthi / Exposure visit (No.)	05
22.	Technology Developed (No.)	-
23.	Research Paper (No.)	03
24.	Lead Paper / Popular Articles (No.)	-
25.	Books / Book Chapter (No.)	-
26.	Success Stories (No.)	-
27.	Award / Recognition	-
28.	SHGs	-
29.	No. of Clusters	05
30.	No. of Villages	23

Sirohi Goat Field Unit



Breeding Doe



Breeding Buck



Kid



Doe with Triplet Kids



Grazing Goats



Breeding Bucks Eating Tree Leaves

19. Surti Goat Field Unit

S.N.	Particular	Observations
1.	Population Size at Nucleus Flock	170
	Population Size at Adopted Farmers	2920
	Population Size at Multiplier Flock	72
2.	Multiplier Flock Established	03
3.	Animal Sold by Nucleus Flock	80
	Animal Sold by Famers	468
	Animal Sold by Multiplier Flock	-
4.	Litter Size in Nucleus Flock	1.63
	Litter Size in Farmers Flock	1.49
	Litter Size in Multiplier Flock	1.52
5.	Buck Distribution	49
6.	No. of Abortion in Nucleus Flock	01
	No. of Abortion in Farmers Flock	95
	No. of Abortion in Multiplier Flock	01
7.	Income / goat / year in Nucleus Flock	-
	Income / goat / year in Farmers Flock	11812.5
	Income / goat / year in Multiplier Flock	-
8.	Infrastructure developed at Nucleus Flock	-
	Infrastructure developed at Farmers Flock	-
9.	Multiple Birth % in Nucleus Flock	72.72
	Multiple Birth % in Farmers Flock	44.30
	Multiple Birth % in Multiplier Flock	46.66
11.	Overall Mortality % at Nucleus Flock	9.9
	Overall Mortality % at Farmers Flock	10.95
	Overall Mortality % at Multiplier Flock	10.10
12.	Total Milk Yield (L) in Nucleus Flock	243.06
	Total Milk Yield (L) in Farmers Flock	120.82
13.	Age First Kidding at Nucleus Flock (d)	571.31
	Age First Kidding at Farmers Flock (d)	-
14.	% Increase 9 Month body weight from base year	45.40 (Farm)/32.95 in Field
	% Increase 9 Month body weight from 2020-21	49.26(Farm)/9.24 in Field
15.	% Increase Total Milk Yield (L) from base year	43.42 %
	% Increase Total Milk Yield (L) from 2020-21	52.31 %
16.	Non-descript goat upgraded (No.)	1448
17.	Training Organized (No.)	10
18.	Farmers benefited (No.)	269
19.	Women Farmers Trained (No.)	149
20.	Health Camp (No.)	06
21.	Gosthi / Exposure visit (No.)	31
22.	Technology Developed (No.)	-
23.	Research Paper (No.)	11
24.	Lead Paper / Popular Articles (No.)	-
25.	Books / Book Chapter (No.)	-
26.	Success Stories (No.)	-
27.	Award / Recognition	-
28.	SHGs	01
29.	No. of Clusters	04
30.	No. of Villages	34

Surti Goat Field Unit



Breeding Doe



Breeding Buck



Women Training



Input Distribution



Buck Distribution



Training Programme

7 (C). EXECUTIVE SUMMARY OF AICRP GOAT UNITS

1. Barbari Farm Unit, ICAR-CIRG Makhdoom, Farah, Mathura, U.P.

PI: Dr. M.K. Singh, Principal Scientist & Head (AGB)



The opening and closing balance of flock on 01-04-24 and 31-03-2025 was 479 and 596. During the period 380 kids born from 248 kidding and kids born as multiples were 66.6%. The litter size was 1.53% and 48.79% doe's delivered multiple births. 44 goats kidded twice in the year 2024-25. Least squares mean for average age at first service, age at first kidding, weight at first service, weight at first kidding and first kidding interval were 422.79±4.43days, 573.49±7.59 days, 20.84±0.30kg, 23.25±0.36kg and 298.38±11.37 days, respectively. Conception rate through natural service was 99.7% and 89% goats conceived in 1st attempt of natural service. Maximum open goats exhibited estrus in May (80%) in summer and in September, October and November (75-84%) months in autumn season. The least squares mean for live weights of kids born during 2024 were 2.02±0.02, 8.88±0.09, 13.80±0.16, 17.16±0.25 and 21.86±0.28 kg at birth, 3, 6, 9 and 12 months of ages, respectively. Males and single born kids were heavier than the females and twin born kids, at all the stages of growth. The effects of sex, type of birth, year of birth, season of birth and parity were significant on almost all ages of growth. The average body weight of male and females under feed lot at 11 months of age (after 6 months of treatment) were 27.61 and 21.52 kg. Corresponding body weights of kids under control (semi-intensive) were 20.34 and 18.19 kg. Male and female kids under feedlot attained 35.74 and 18.30% higher body weights than controlled kids. The h^2 estimates were 0.425±0.07, 0.254±0.057, 0.270±0.048, 0.234±0.045 and 0.122±0.042 at birth, 3-, 6-, 9- and 12-month weight. The least square means for 90 days milk yield, 140 days milk, total lactation yield and lactation length of goats kidded in 2024 were 84.43±1.25 litre, 124.44±1.68 litre, 138.96±2.33 litre and 177.60±1.85 days, respectively. There was 45 to 105% improvement in milk yield traits over the base years. The year and season of kidding and parity had significantly affected the lactation performances. The selection differential for 9 months body weight was 8.20 kg and 8.40 liters for dam's 140 days milk yield. The h^2 estimates were 0.149±0.057, 0.194±0.056, 0.218±0.048 and 0.111±0.045 0.122±0.049 for 90-D, 140-D, TLMY and LL. A total 164 goats (116 male and 48 females) were provided to farmers and other stake holders for field improvement. Whereas, multiplier flock owners are also sold 514 kids and adult goats to other farmers. Milk produced was 17146 litres from 204 goats through 248 kiddings. Four multiplier flocks were established in the year. Annual culling and mortality rate was 5.35 and 3.60%. Fodder trees and fodder plants are also maintained in 4.5-hectare land. One sick ward, one small size shed (30 goats) and fencing in 3 acre agro-forestry area were completed and a mini size tractor with trolley purchased. Two technologies developed, validated and disseminated in farmers' flock. Five research papers were published in international and national journals. Nearly 2200 farmers were trained on goat management through 20 trainings on scientific goat farming. Total revenue generated was Rs. 32.38 lakhs.

Table 1: Reproductive performance in Barbari goats over the years

Factor	Reproductive Performance (s)				
Overall Mean	Age at first Service (d)	Age at first kidding (d)	Wt. at first Service (kg)	Wt. at first kidding (kg)	First Kidding Interval (d)
	446.38±5.76 (274)	588.62±6.49 (253)	19.77±0.19 (274)	22.70±0.23 (253)	357.60±6.43 (192)
Year of birth	**	**	*	**	**
2020	479.48^{a}±6.74 (67)	624.99^{a}±6.61 (67)	18.49^{a}±0.19 (67)	21.96^{a}±0.33 (67)	392.24^{a}±12.77 (37)
2021	455.02^{b}±14.25 (52)	601.88^{b}±14.01 (52)	19.14^{b}±0.40 (52)	22.51^{b}±0.47 (52)	373.80^{b}±13.71(75)
2022	430.93^{c}±13.17 (44)	576.16^{c}±13.10 (44)	18.39^{a}±0.48 (44)	22.47^{b}±0.45 (44)	338.36^{c}±15.42 (25)
2023	442.79^{b} ±18.81 (53)	586.29^{c}±12.69 (38)	21.97^{c}±0.53 (53)	24.51^{c}±0.58 (38)	282.56^{d}±13.41 (34)
2024	422.79^{cd}±4.43 (58)	573.49^{c}±7.59 (52)	20.84^{d}±0.30 (58)	23.25^{bc}±0.36 (52)	298.38^{d}±11.37 (21)
***P<0.01, *P<0.05*					

*Value in parenthesis are number of observations

Table 2: Least square means of body weight (kg) in Barbari goats at different ages

Factor	Body weight at different ages (Growth Performance)				
Overall Mean	Birth	3 Month	6 Month	9 Month	12 Month
	1.94±0.01 (1452)	7.94±0.06 (1358)	11.56 ±0.10 (1025)	15.84±0.14 (884)	20.03±0.16 (689)
Year of birth	**	**	**	**	**
2021	1.84^{a}±0.01 (458)	7.79^{a}±0.08 (449)	11.32^{a}±0.14 (411)	15.77^{a}±0.18 (391)	19.66^{a}±0.21 (283)
2022	1.83^{a}±0.02 (249)	7.18^{b}±0.11 (228)	9.87^{b}± 0.20 (166)	14.17^{b}±0.27 (145)	18.35^{b}±0.31 (112)
2023	1.82^{a}±0.02 (262)	7.63^{a}±0.10 (235)	11.44^{a}±0.17 (198)	16.47^{c}±0.23 (169)	20.76^{c}±0.26 (142)
2024	2.02^{b}±0.02 (308)	8.88^{c}±0.09 (296)	13.80^{c}±0.16 (250)	17.16^{d}±0.25 (179)	21.86^{d}±0.28 (152)
2025	2.21^{b}±0.02 (175)	8.64^{c}±0.13 (150)	-	-	-
Season of birth	*	**	**	**	**
1	1.97^{a}±0.01 (790)	8.37^{a}±0.07 (744)	11.99^{a}±0.13 (528)	16.54^{a}±0.17 (495)	20.72^{a}±0.20 (413)
2	1.91^{b}±0.01 (662)	7.51^{b}±0.08 (614)	11.13^{b}±0.13 (497)	15.14^{b}±0.18 (389)	19.35^{b}±0.21 (276)
Sex of kid	**	**	**	**	**
Male	2.04^{a}±0.01 (727)	8.31^{a}±0.07 (677)	12.43^{a}±0.13 (500)	17.24^{a}±0.17 (432)	22.24^{a}±0.19 (329)
Female	1.84^{b}±0.01 (725)	7.54^{b}±0.07 (681)	10.68^{b}±0.12 (525)	14.44^{b}±0.17 (452)	18.23^{b}±0.19 (360)
Type of birth	**	**	**	**	**
1	2.13^{a}±0.01 (460)	8.82^{a}±0.08 (431)	12.54^{a}±0.15 (340)	16.64^{a}±0.19 (297)	20.65±0.22 (226)
2	1.92^{b}±0.01 (864)	7.61^{b}±0.05 (814)	11.36^{b}±0.10 (599)	15.63^{b}±0.14 (510)	20.07±0.15 (402)
≥3	1.77^{c}±0.02 (128)	7.39^{b}±0.14 (113)	10.78^{c}±0.25 (86)	15.25^{b}±0.34 (77)	19.37±0.38 (61)

*Value in parenthesis are number of observations

Table 3: Lactation performance of Barbari goats over the years

Factor	Milk Yield of different Lactation traits			
Overall Mean	90d milk yield (L)	140dmilk yield (L)	Total milk yield (L)	Lactation length (d)
	78.63±0.88 (879)	130.34±3.89 (752)	135.98±1.64 (793)	175.77±1.31 (793)
Year of Kidding	**	**	**	**
2021	76.49^{a}±1.15 (282)	120.16^{a}±1.50 (277)	136.73^{a}±2.14 (282)	181.13^{a}±1.70 (282)
2022	84.54^{b}±1.41 (157)	134.94^{b}±1.87 (147)	152.22^{b}±2.62 (157)	179.12^{b}±2.09 (157)
2023	74.92^{a}±1.31 (162)	114.17^{c}±1.74 (151)	122.00^{c}±2.43 (162)	165.24^{c}±1.94 (162)
2024	84.43^{b}±1.25 (192)	124.44^{d}±1.68 (177)	138.96^{a}±2.33 (192)	177.60^{d}±1.85 (192)
2025	79.78^{a}±1.82 (86)	-	-	-
Season of Kidding	**	*		
1	81.58^{a}±1.00 (448)	132.94^{a}±3.95 (343)	136.37±1.98 (362)	174.76±1.58 (362)
2	75.68^{b}±1.06 (431)	127.74^{b}±3.97 (409)	133.59±1.86 (431)	176.79±1.48 (431)
Type of Kidding	*	*		
Single	79.46^{a}±0.86 (440)	130.50^{a}±3.90 (382)	134.52±1.69 (396)	175.10±1.35 (396)
Twin	75.59^{b}±0.78 (399)	126.05^{b}±3.83 (334)	130.19±1.48 (359)	175.50±1.18 (359)
≥ Triplet	81.85^{c}±2.34 (40)	136.48^{c}±4.89 (36)	140.22±4.41 (38)	176.72±3.51 (38)

*Value in parenthesis are number of observations

Table 4: Mortality rate in different age groups over the years

Year	0-3 M	3-6 M	6-12 M	Adult	Overall
2020-21	0.79	1.36	1.17	2.56	3.9
2021-22	0.96	1.91	0.31	3.10	3.2
2022-23	4.74	6.68	3.16	4.74	9.3
2023-24	4.58	5.86	3.64	1.93	6.0
2024-25	2.88	3.46	0.58	1.34	3.6

2. Jamunapari Farm Unit, ICAR-CIRG Makhdoom, Farah, Mathura, U.P.
PI: Dr. M.K. Singh, Principal Scientist & Head (AGB)



The opening and closing balance of flock on 01-04-24 and 31-03-2025 was 383 and 447 respectively. During the period 163 kids were born from 130 kidding, 48 goats were sold, 48 died, 20 culled 27 purchased from field and 10 were slaughtered. The litter size was 1.28%. Kids born as multiple births of total birth were 44.3%. Breeding efficiency on the basis of doe's tupped was 76% and kidding efficiency on the basis of does doe's tupped was 88%, respectively. Least squares mean for average age at first service (AFS), age at first kidding (AFK), weight at first service (WFS), weight at first kidding (WFK) and first kidding interval (FKI) were 526.47±26.48days, 674.20±29.08days, 30.78±1.32kg, 33.08±1.02 kg and 329.54±15.80 days, respectively. Conception rate through natural service was 89.42%. Maximum open goats exhibited estrus in May (75%) in summer followed by September (60%), October (54%) in autumn season and August (44%) in rainy season. The least squares mean for body weight of kids born during 2024 were 3.21±0.04, 10.86±0.17, 16.11±0.21, 21.62±0.32 and 28.36±0.45 kg, at birth, 3, 6, 9 and 12 months of ages, respectively. Males and single born kids were heavier than the females and twin born kids at all stages of growth. The effects of sex, type of birth, year of birth, season of birth and parity were significant almost all ages of growth. The h2 estimates were 0.32±0.04, 0.35±0.04, 0.31±0.04, 0.28±0.04 and 0.32±0.04 for birth, 3-, 6-, 9- and 12-month weight. Fifty-five goats (5 male and 50 female) introduced in nucleus flock from its home tract (Provided by State AH department, UP). The least square means for 90 days milk yield, 140 days milk, total lactation yield and lactation length of goats kidded in 2024-25 were 90.45±3.80litre, 138.15±5.90litre, 140.61±7.73litre and 184.49±3.93days, respectively. The year and season of kidding, type of birth and parity have significantly affected lactation performance. Goat kidded in spring season significantly yielded more milk than those kidded in spring. Goat kidded twins and triplet yielded significantly more milk. Significantly lesser milk yield was obtained from first kidders. The selection differential for 9 months body weight was 4.50 kg and 107 liters for dam's total milk yield. A total 48 purebred and 30 Jamunapari type goats were provided to farmers and other stake holders for field improvement. Whereas, Multiplier flocks Jamunapari breed also supplied (sold) 87 purebred goats to other farmers for improvement in field. Overall culling and mortality in the flock was 3.49 and 8.38% in the year. Total milk produced by unit was 8798 litres from 130 kidding. Establishment of one multiplier flocks facilitated. Unit staff also participated in organization of 4 goat fair of Jamunapari goat in its home tract (Etawah and Auriya districts, UP). Two technologies developed, validated and disseminated in farmers' flock. Four research papers were published. Growing fodder plants were maintained in 2-hectare land. Work has initiated for the construction of Bhoosa store and extension of 4 sheds. Total revenue generated was Rs. 16.38 lakhs (56% from sale of animals).

Table 1: Reproductive performance in Jamunapari goats over the years

Factor	Reproductive Performance (s)				
Overall Mean	Age at first Service (d)	Age at first kidding (d)	Wt. at first Service (kg)	Wt. at first kidding (kg)	First Kidding Interval (d)
	594.75±12.35 (189)	701.58 ± 12.21 (189)	30.41±0.43 (191)	32.89±0.47 (191)	382.41±12.70 (175)
Year of birth	*	**	*	*	*
2020	585.26^{a}±18.02 (58)	719.09^{a}±17.81 (58)	27.67^{a}±0.63 (58)	29.64^{a}±0.69 (58)	453.61^{a}±13.94 (58)
2021	654.74^{b}±26.78 (34)	801.29^{b}±26.48 (34)	29.06^{b}±0.93 (34)	33.78^{b}±1.03 (34)	415.73^{b}±15.86 (34)
2022	569.56^{a}±18.91 (51)	715.89^{a}±18.69 (51)	28.46^{a}±0.66 (51)	31.51^{c}±0.72 (51)	382.89^{c}±14.15 (51)
2023	511.47^{c}±26.48 (23)	664.29^{c}±26.18 (23)	31.28^{c}±0.92 (23)	33.78^{b}±1.02 (23)	369.54^{ac}±15.80 (23)
2024	526.47^{c}±26.48 (23)	674.2^{a}±29.08 (23)	30.78^{bc}±1.32 (25)	33.08^{b}±1.02 (25)	329.54^{d}±15.80 (9)
**P<0.01, *P<0.05					

*Value in parenthesis are number of observations

Table 2: Least square means of body weight (kg) in Jamunapari goats at different ages

Factor	Body weight at different ages				
Overall Mean	Birth	3 Month	6 Month	9 Month	12 Month
	3.34±0.02 (829)	10.69±0.08 (781)	15.50 ±0.11 (658)	20.05±0.13 (583)	24.68±0.16 (462)
Year of birth	**	**	**	**	**
2021	3.36^{a}±0.04 (228)	11.21^{a}±0.17 (222)	17.20^{a}±0.17 (213)	21.18^{a}±0.19 (203)	25.25^{a}±0.20 (166)
2022	3.57^{b}±0.03 (274)	10.63^{b}±0.12 (260)	14.33^{b}±0.15 (224)	18.37^{b}±0.16 (213)	22.95^{b}±0.16 (178)
2023	2.95^{c}±0.03 (87)	9.49^{c}±0.15 (84)	12.95^{c}±0.20 (75)	18.79^{b}±0.33 (72)	24.83^{c}±0.63 (62)
2024	3.21^{a}±0.04 (175)	10.86^{d}±0.17 (155)	16.11^{d}±0.21 (146)	21.62^{c}±0.32 (95)	28.36^{d}±0.45 (56)
2025	3.15^{a}±0.07 (65)	10.28^{e}±0.13 (60)	-	-	-
Season of birth	**	**	**	**	**
1	3.45^{a} ±0.03 (361)	10.43^{a}±0.11 (333)	15.94^{a}±0.14 (255)	20.42^{a}±0.16 (233)	25.58^{a}±0.23 (187)
2	3.25^{b} ±0.02 (468)	10.90^{b}±0.10 (448)	15.22^{b}±0.15 (403)	19.70^{b}±0.18 (350)	24.07^{b}±0.21 (275)
Sex of kid	**	**	**	**	*
Male	3.44^{a}±0.03 (438)	11.00^{a}±0.10 (412)	16.01^{a}±0.16 (345)	20.62^{a}±0.19 (304)	25.21^{a}±0.27 (227)
Female	3.22^{b}±0.03 (391)	10.36^{b}±0.11 (369)	14.93^{b}±0.14 (313)	19.30^{b}±0.15 (279)	24.17^{b}±0.17 (235)
Type of birth	**	**	**	**	**
Single	3.44^{a}±0.03 (412)	11.04^{a}±0.11 (390)	15.93^{a}±0.16 (333)	20.51^{a}±0.18 (290)	25.25^{a}±0.26 (220)
Multiple	3.24^{b}±0.03 (417)	10.35^{b}±0.10 (391)	15.05^{b}±0.15 (325)	19.47^{b}±0.17 (293)	24.17^{b}±0.19 (242)

*Value in parenthesis are number of observations

Table 3: Lactation performance of Jamunapari goats over the years

Factor	Lactation Performance			
Overall Mean	90d milk yield (L)	140dmilk yield (L)	Total milk yield (L)	Lactation length (d)
	91.94±2.31 (584)	134.75±3.87 (488)	132.68±4.56 (529)	174.11±2.31 (529)
Year of Kidding	**	**	**	**
2021	103.58^{a}±3.49 (158)	146.69^{a}±5.25 (146)	157.70^{a}±6.94 (158)	177.20^{a}±3.52 (158)
2022	94.01^{b}±3.25 (177)	132.79^{b}±5.00 (149)	136.20^{b}±6.45 (177)	169.04^{b}±3.27 (177)
2023	78.08^{c}±5.13 (67)	110.55^{c}±8.37 (53)	112.20^{c}±10.16 (67)	165.71^{b}±5.15 (67)
2024	90.45^{d}±3.80 (135)	138.15^{b}±5.90 (114)	140.61^{b}±7.73 (127)	184.49^{c}±3.93 (127)
2025	110.60^{a}±6.35 (47)	161.59^{a}±11.81 (26)	-	-
Season of Kidding				
1	95.96^{a}±3.10 (247)	138.65^{a}±5.09 (194)	134.02±6.64 (200)	169.57^{a}±3.37 (200)
2	88.93^{b}±2.80 (337)	130.86^{b}±4.48 (294)	131.34±4.93 (329)	178.65^{b}±2.50 (329)
Type of Kidding	**	*		
Single	89.09^{a}±2.92 (358)	130.52^{a}±4.86 (295)	127.62^{a}±6.14 (319)	172.33±3.11 (319)
≥Twin	94.80^{b}±3.29 (266)	138.99^{b}±5.24 (193)	137.74^{b}±6.66 (210)	175.88±3.38 (210)

*Value in parenthesis are number of observations

Table 4: Mortality rate over the years

Year	2020-21	2021-22	2022-23	2023-24	2024-25
Flock Strength	896	753	670	537	573
Goats Died	71	34	65	35	48
Mortality (%)	7.92	4.51	9.70	6.51	8.38
Goat Culled	41	65	43	20	20
Culling (%)	4.57	8.63	6.41	3.72	3.49

3. Sirohi Farm Unit, ICAR-CSWRI, Avikanagar, Rajasthan
PI: Dr. S.S Misra, Principal Scientist & Head (AGB)



The opening balance of flock on 01.04.2024 was 192 males and 374 females totalling 566 animals. The additions during the year due to birth of 254 (143 male and 111 female) kids. The reductions were due to death of 45 animals, culling of 42 animals and sale of 159 animals (90 males and 69 females). The closing balance as on 31.03.2025 was 183 males and 333 females totalling 516 animals. Least squares mean for average age at first service (AFS), age at first kidding (AFK), weight at first service (WFS) and weight at first kidding (WFK) were 450.82±13.56days, 598.68±13.60days, 35.29±0.65kg, and 35.86±0.58kg, respectively. The least squares mean (LSM) for live weights of kids born during 2024-25 at birth, 3, 6, 9 and 12 months of age were 3.02±0.03, 13.19±0.15, 20.14±0.27, 25.62±0.42 and 30.78±0.43 kg, respectively. The males and single born kids were heavier than the females and multiple born kids, respectively, at all stages of growth. The effects of year, sex, type of birth and regression of dam weight were significant on all the traits, except regression of dam weight on post weaning average daily gain (3-12 month; PDG3-12). The average weight of gain was for 0-3 and 3-12 month was 112.70±1.66 and 61.07±1.38 g, respectively. The least squares mean for milk yield of does kidded during 2024-25 at 90 days (90DMY), 150 days (150DMY), Total lactation (TLMY) and Lactation length (LL) were 89.38±0.88, 125.36±1.21 and 129.73±2.03 litres, and 167.90±2.53 days, respectively. The effects of year of kidding and lactation order were significant on all the traits. Out of 183 does available for breeding, 167 were tupped and 105 kidded with 17 giving birth to twins. The tupping percentage was 91.26. The breeding efficiency was 68.60 and 75.64%, on the basis of does available and does tupped, respectively. The kidding percentage was 69.77 and 76.92 on the basis of does available and does tupped, respectively. The litter size was 1.14. The mortality rates in 0-3, 3-6, 6–12-month age groups and in adults were 8.37, NIL, 0.33 and 4.04 %, with overall mortality rate was 3.69 %. The culling rates in 0-3, 3-6, 6–12-month age group and in adults were NIL, 1.58, NIL and 6.62 %, respectively. The overall culling rate was 3.45 %. A total of 159 Sirohi goats comprising of 90 males and 69 females were sold/distributed for genetic improvement. The revenue generated was Rs. 26,34,157.00.

Table 1: Reproductive performance in Sirohi goats (Farm Unit) over the years

Factor	Reproductive Performance (s)			
Overall Mean	Age at first Service (d)	Age at first kidding (d)	Wt. at first Service (kg)	Wt. at first kidding (kg)
	472.92±6.42 (202)	620.19± 6.44 (202)	36.47± 0.31 (202)	37.24± 0.27 (202)
Year	**	**	**	**
2020	529.33± 11.07 (57)	677.09± 11.10 (57)	38.53± 0.53 (57)	39.77± 0.47 (57)
2021	515.73± 13.05 (41)	662.90± 13.09 (41)	36.12± 0.62 (41)	37.11± 0.56 (41)
2022	451.96± 11.94 (49)	598.35± 11.98 (49)	37.29± 0.57 (49)	37.49± 0.51 (49)
2023	416.77± 20.27 (17)	563.94± 20.33 (17)	35.12± 0.97 (17)	35.96± 0.87 (17)
2024	450.82± 13.56 (38)	598.68± 13.60 (38)	35.29± 0.65 (38)	35.86± 0.58 (38)
***P<0.01, *P<0.05*				

*Value in parenthesis are number of observations

Table 2. Least square means of body weight (kg) in Sirohi goats at different ages

Factor	Body weight at different ages (kg)				
Overall Mean	Birth	3 Month	6 Month	9 Month	12 Month
	3.15±0.01 (1606)	12.81±0.05 (1468)	21.16±0.09 (1134)	28.40±0.12 (953)	31.90±0.13 (759)
Year of birth	**	**	**	**	**
2020-21	3.12±0.03 (335)	13.02±0.13 (319)	23.29±0.21 (276)	31.31±0.24 (261)	33.79±0.23 (230)
2021-22	3.17±0.02 (349)	12.72±0.12 (334)	21.15±0.22 (242)	28.41±0.27 (205)	32.55±0.33 (110)
2022-23	3.19±0.03 (342)	13.46±0.13 (291)	20.35±0.23 (215)	27.24±0.29 (175)	32.67±0.26 (174)
2023-24	3.25±0.03 (343)	12.54±0.13 (308)	22.81±0.22 (238)	29.38±0.26 (226)	30.91±0.26 (182)
2024-25	3.02±0.03 (237)	13.19±0.15 (216)	20.14±0.27 (163)	25.62±0.42 (86)	30.78±0.43 (63)
Sex	**	**	**	**	**
Male	3.33±0.02 (964)	13.57±0.08 (883)	22.62±0.13 (690)	30.81±0.16 (579)	34.66±0.16 (486)

Female	2.97±0.02 (955)	12.04±0.08 (879)	19.70±0.13 (679)	25.99±0.17 (585)	29.15±0.17 (469)
Type of Birth	**	**	**	**	**
Single	3.45±0.01 (1059)	14.47±0.07 (983)	23.00±0.12 (811)	29.89±0.15 (702)	32.99±0.15 (600)
Multiple	2.84±0.02 (860)	11.14±0.08 (779)	19.31±0.15 (558)	26.91±0.18 (462)	30.82±0.19 (355)

*Value in parenthesis are number of observations

Table 3: Lactation performance of Sirohi Goats over the years

Factor	Milk Yield of different Lactation traits			
Overall Mean	90d milk yield (L)	150d milk yield (L)	Total milk yield (L)	Lactation length (d)
	85.30±0.35 (960)	123.42±0.49 (754)	132.07±0.78 (1025)	178.56±0.98 (1025)
Year of kidding	**	**	**	**
2020-21	82.85±0.81 (212)	123.70±1.06 (192)	143.97±1.89 (214)	194.78±2.36 (214)
2021-22	85.45±0.80 (214)	121.95±1.14 (166)	130.72±1.85 (219)	176.48±2.32 (219)
2022-23	86.33±0.94 (156)	123.36±1.25 (139)	132.18±2.05 (179)	174.64±2.56 (179)
2023-24	89.26±0.85 (197)	133.42±1.39 (111)	132.23±1.84 (229)	177.82±2.30 (229)
2024-25	89.38±0.88 (181)	125.36±1.21 (146)	129.73±2.03 (184)	167.90±2.53 (184)

*Value in parenthesis are number of observations

Table 4. Mortality rate over the years

Particulars	2020 (Jan-Dec)	2021-22 (Apr-March)	2022-23 (Apr-March)	2023-24 (Apr-March)	2024-25 (Apr-March)
Flock strength	771	701	615	550	566
Goats died	39	43	67	50	45
Mortality %	3.53	4.11	6.94	5.71	5.49

4. Andaman Local Goat Field Unit, Central Island Agricultural Research Institute, Port Blair, Andaman & Nicobar Islands

PI: Dr. Rafeeque. R. Alyethodi, Sr. Scientist (AGB)



Andamani goat unit is operational at ICAR-Central Island Agricultural Research Institute, A&N Islands since 2014-15. Three clusters were established in South, Middle, and North Andaman districts. 124 goats were also maintained at nucleus flock. The opening and closing flock balance was 4109 and 4272, respectively. A total of 291 farmers from 39 villages were registered. New registrations and births were 1020 and 902, respectively, while 207 goats died and 1492 were sold. Least squares mean for average age at first service (AFS), age at first kidding (AFK), weight at first service (WFS), weight at first kidding (AFK) and first kidding interval (FKI) were 242.01±1.71days, 392.86±5.63days, 11.41±0.06 kg, 16.23±0.29kg, 261.42±2.50days, respectively. Least square means of body weights at birth, 3, 6, 9 and 12 months were 1.47±0.01, 6.20±0.07, 9.70±0.10, 12.98±0.10 and 16.13±0.07 kg, respectively. The least square means for 60 days milk yield, total lactation yield and lactation length of goats kidded in 2024-25 were 38.8±0.15litre, 40.61±0.73litre and 94.2±1.5days, respectively. Breeding efficiency and kidding percentage were 154.85 and 152.15. Multiple births occurred in 58.09% of kiddings. Nine bucks were distributed, and 77 male kids were selected based on their performance. Deworming and mineral mixture were provided to 2190 and 2400 goats, respectively. Overall mortality rate was 4.38%. Fourteen training programmes benefited 346 farmers. 260 AIs were performed with 38.5% success. Net income per animal/year was Rs. 5706. Published two research articles and prepared one technical manual.

Table 1: Reproductive performance in Andamani goats over the years

Factor	Reproductive Performance (s)				
Overall Mean	Age at first Service (d)	Age at first kidding (d)	Wt. at first Service (kg)	Wt. at first kidding (kg)	Kidding interval (d)
	244.01 ± 10.40 (988)	394.64 ± 4.49 (916)	11.45 ± 0.33 (876)	16.51 ± 0.20 (770)	270.34 ± 7.43 (698)
Year of birth	**	**	**	**	**
2020	253.23 ± 15.2 (218)	403.25 ± 5.12 (212)	11.41 ± 0.32 (185)	16.47 ± 0.14 (175)	281.0 ± 14.15 (152)
2021	242.33 ± 10.12 (224)	392.32 ± 3.24 (220)	11.45 ± 0.45 (187)	16.53 ± 0.21 (182)	273.55 ± 1.21 (160)
2022	241.13 ± 11.44 (230)	392.22 ± 4.31 (215)	11.51 ± 0.34 (180)	16.55 ± 0.20 (187)	273.31 ± 3.42 (146)
2023	241.35 ± 4.27 (165)	392.56 ± 4.39 (155)	11.46 ± 0.33 (160)	16.79 ± 0.19 (140)	262.41 ± 6.45 (132)
2024	242.01 ± 1.71 (151)	392.86 ± 5.63 (114)	11.41 ± 0.06 (164)	16.23 ± 0.29 (86)	261.42 ± 2.50 (108)
***P<0.01, *P<0.05*					

*Value in parenthesis are number of observations

Table 2: Least square means of body weight (kg) in Andamani goats at different ages

Factor	Body weight at different ages (kg)				
Overall Mean	Birth	3 Month	6 Month	9 Month	12 Month
	1.41 ± 0.01 (1951)	6.06±0.21 (2065)	9.76 ±0.18 (1583)	12.43 ± 0.15 (1613)	6.08 ± 0.14 (1278)
Year of birth	**	**	**	**	**
2020-21	1.37^{cd} ± 0.01 (366)	5.77^{ab}±0.12 (195)	9.52^{a} ± 0.25 (166)	11.94^{c} ± 0.29 (120)	15.82^{cd} ± 0.21 (110)
2021-22	1.32^{c} ± 0.01 (167)	5.97^{a} ± 0.23 (559)	9.76^{a} ± 0.21 (352)	12.05^{c} ± 0.16 (443)	16.01^{bc} ± 0.18 (474)
2022-23	1.39^{c} ± 0.01 (256)	6.22^{a} ± 0.22 (342)	9.78^{a} ± 0.23 (272)	12.31^{bc} ± 0.12 (325)	15.97^{bc} ± 0.08 (237)
2023-24	1.44^{b} ± 0.01 (492)	6.16^{a} ± 0.32 (387)	10.03^{a} ± 0.12 (377)	12.55^{b} ± 0.11 (320)	16.37^{a} ± 0.12 (267)
2024-25	1.47^{a} ± 0.01 (670)	6.20^{a} ± 0.07 (582)	9.70^{a} ± 0.10 (416)	12.98^{a} ± 0.10 (405)	16.13^{ab} ± 0.07 (190)

*Value in parenthesis are number of observations

Table 3: Lactation performance of Andamani goats over the year

Factor	Milk Yield of different Lactation traits		
Overall Mean	60d milk yield (L)	Total milk yield (L)	Lactation length (d)
	38.89±0.26 (355)	40.72±0.79 (344)	94.48±1.37 (344)
Year of Kidding	**	**	**
2020-2021	38.70±0.13 (72)	39.43±1.05 (68)	91.7±2.93 (68)
2021-2022	38.82±0.20 (81)	40.84±0.52 (76)	94.7±1.55 (76)
2022-23	38.84±0.32 (82)	40.86±0.92 (76)	95.5±1.25 (76)
2023-24	39.10±0.35 (80)	41.75±0.95 (80)	96.1±1.10 (80)
2024-25	38.8±0.15 (112)	40.61±0.73 (112)	94.2±1.5 (112)

*Value in parenthesis are number of observations

Table 4: Mortality rate in different age groups over the years

Year	0-1 M	1-3 M	3-6 M	6-12 M	Adult	Overall
2020-21	11.43	24.29	5.71	47.14	11.43	2.3
2021-22	20.19	16.46	16.15	24.84	22.36	4.04
2022-23	15.30	16.39	14.75	28.96	24.59	2.71
2023-24	8.78	7.80	15.61	36.10	31.71	4.42
2024-25	13.04	21.74	23.67	19.81	21.74	4.38

5. Assam Hill Goat Field unit, Assam Agricultural University, Burnihat,
PI: Dr. Arpana Das, Professor (AGB)



The Assam Hill Goat Field Unit under ICAR-AICRP on Goat Improvement began in 2009 and now operates in six clusters, including the newly adopted Nalbari. The opening and closing balance of flock on 01-04-24 and 31-03-2025 was 3725 and 4996. The nucleus herd grew from 84 to 176, and the field flocks from 2,235 to 4,996 goats. Least squares mean for average age at first service (AFS), age at first kidding (AFK), weight at first service (WFS), weight at first kidding (AFK) and first kidding interval (FKI) were 252.93±2.80days, 402.17±2.86 days, 11.53±0.11kg, 16.03±1.00kg and 232.04±1.90days, respectively. The least squares mean of kids' average body weights (kg) at birth, 3, 6, 9 and 12 months were 1.55±0.03, 5.99±0.13, 8.72±0.16, 11.66±0.15 and 14.88±0.15 kg in the nucleus flock and 1.29±0.04, 5.22±0.03, 8.64±0.07, 11.54±0.13 and 14.82 ±0.33 at birth, 3, 6, 9 and 12 month of age in the field flock. The least square means for 60 days milk yield, 90 days milk yield and total lactation yield of goats kidded in 2024-25 was 8.34±0.40 litre, 12.78±0.62 litre and 12.78±0.62 litre, respectively. The litter sizes were 1.67 in field and 1.69 at nucleus flock. Multiple births were observed in 51.68% and 62.06%, in field and nucleus flock, respectively. Milk yields (90-day) were 12.78 kg (field) and 14.10 kg (nucleus). Mortality rates were 2.30% in nucleus, flock, 5.28% in the field, and 2.88% in multiplier flock. Eight multiplier flocks with 227 goats were established. 36 elite bucks were distributed, and 32 selected bucks from field flocks were used for breeding. The unit conducted 55 training programs, 25 animal health camps, and several awareness events, with support from SITA, NGOs, and the State AH Department. Income per goat/year was Rs. 909 from nucleus flock Rs. 3,723 from field flock and Rs. 4,297 from multiplier flock. Four research papers, 3 popular articles and 4 success stories were published. 57 entrepreneurs were trained and Rs. 30,500 revenue was generated. Farmers received state-level awards, and the team won national accolades at ISSGPUCON 2025.

Table 1: Reproductive performance in Assam Hill goats over the years

Factor	Reproductive Performance (s)				
Overall Mean	Age at first Service (d)	Age at first kidding (d)	Wt. at first Service (kg)	Wt. at first kidding (kg)	First Kidding Interval (d)
	253.29 ±1.42 (1150)	401.71±1.43 (1150)	11.20 ± 0.05 (1150)	14.29 ± 0.06 (1150)	226.69 ± 0.78 (998)
Year of birth			**	**	**
2020	251.76±2.03 (231)	402.71±4.19 (211)	11.21^{b}±0.17 (229)	13.86^{a}± 0.37 (203)	225.17^{b}±2.03 (200)
2021	256.64±4.01 (235)	401.37±4.01 (222)	10.94^{a}±0.18 (236)	13.76^{a}± 0.91 (193)	226.24^{c}±6.12 (192)
2022	252.47±6.01 (325)	401.32±4.07 (321)	10.85^{a} ±0.47 (243)	14.17^{b}± 0.59 (298)	225.57^{b}±4.03 (217)
2023	253.13±3.85 (239)	401.15±5.64 (227)	11.86^{b}±0.14 (238)	14.10^{b}± 0.18 (205)	224.85^{a}±2.16 (225)
2024	252.93±2.80 (316)	402.17±2.86 (306)	11.53^{b}±0.11 (316)	16.03^{c} ± 1.00 (306)	232.04^{c}±1.90 (165)
***P<0.01, *P<0.05*					

*Value in parenthesis are number of observations

Table 2: Least square means of body weight (kg) in Assam Hill goats at different ages

Factor	Body weight at different ages (kg)				
Overall Mean	Birth	3 Month	6 Month	9 Month	12 Month
	1.24±0.06 (7179)	5.24±0.04 (5275)	8.24±0.09 (4354)	10.90±0.08 (3564)	13.87±0.16 (2896)
Year of birth	**	**	**	**	**
2020-21	1.23±0.11 (1124)	5.05^{b}±0.05 (861)	7.54^{a}±0.21 (745)	10.48^{a}±0.03 (534)	13.49^{a}±0.19 (361)
2021-22	1.20±0.01 (1628)	5.65^{c}±0.05 (912)	8.45^{b}±0.07 (597)	10.98^{b}±0.09 (441)	13.52^{a}±0.12 (290)
2022-23	1.23±0.04 (1414)	5.10^{b}±0.03 (1095)	8.05^{b}±0.05 (810)	10.11^{a}±0.09 (562)	13.13^{a}±0.12 (422)
2023-24	1.23±0.09 (1268)	5.18^{b}±0.04 (1107)	8.51^{b}±0.06 (1069)	11.41^{b}±0.05 (1004)	14.37^{b}±0.06 (946)
2024-25	1.29±0.04 (1745)	5.22^{b}±0.03 (1300)	8.64^{c}±0.07 (1133)	11.54^{b}±0.13 (1023)	14.82^{b}±0.33 (877)

*Value in parenthesis are number of observations

Table 3: Lactation performance of Assam Hill goats over the years

Factor	Milk Yield of different Lactation traits		
Overall Mean	60d milk yield (Kg)	90d milk yield (Kg)	Total milk yield (Kg)
	8.802 ± 0.29 (2235)	13.84 ± 0.61 (1464)	13.85 ± 0.61 (1464)
2020-21	9.28[b]±0.31 (421)	14.31[b]±5.92 (254)	14.31[b]±5.92 (254)
2021-22	9.42[b]±0.38 (628)	14.37[b]±5.99 (269)	14.37[b]±5.99 (269)
2022-23	8.99[a]±0.52 (433)	13.81[a]±6.12 (205)	13.81[a]±6.12 (205)
2023-24	8.08[a]± 0.20 (105)	13.98 [a]± 0.21 (92)	13.98 [a]± 0.21 (92)
2024-25	8.34[a]± 0.40 (648)	12.78 [a]± 0.62 (644)	12.78[a]± 0.62 (644)

*Value in parenthesis are number of observations

Table 4. Mortality rate over the years

Year	2020-2021	2021-22	2022-23	2023-24	2024-25
Flock Strength	4399	5304	5562	5351	5962
Goats Died	238	325	443	488	315
Mortality (%)	5.41	6.13	7.96	9.12	5.28

6. Black Bengal Unit, Research Complex for Eastern Region, Patna

PI: Dr Shanker Dayal, Pr. Scientist (AGB)



AICRP on Goat Improvement was started at ICAR Research Complex for Eastern Region, Patna in the year 2018-19. The centre continued its activities in four clusters in Bihar (E. Champaran, Araria, Jamui and Katihar), based on the Bengal goat population density. The opening and closing balance of flock on 01-04-24 and 31-03-2025 was 4651 and 3934. A total of 1939 does were available for breeding. Tupping percentage was recorded at 92.72% while breeding efficiency was recorded at 99.24% on the basis of does tupped. The overall mortality was 3.97 %. Least squares mean for average age at first service (AFS), age at first kidding (AFK), weight at first service (WFS), weight at first kidding (AFK) and first kidding interval (FKI) were 279.83±23.58days, 432.86±25.56days, 11.79±1.73kg, 13.47±1.47kg and 224.30±12.37days, respectively. The average of kids' body weight at birth, 3, 6, 9 and 12 months of age was 1.38±0.26, 4.65±0.96, 7.10±2.42, 10.20±1.31 and 12.60±2.27kg, respectively. Average lactation milk yield was recorded 22.78±0.33 kg at 90-day and 23.35±0.63kg in total milk yield. Six multiplier flocks were added this year.

Table 1: Reproductive performance in Black Bengal goats over the years

Factor	Reproductive Performance (s)				
Overall Mean	Age at first Service (d)	Age at first kidding (d)	Wt. at first Service (kg)	Wt. at first kidding (kg)	First Kidding Interval (d)
	272.82 ± 14.95 (7093)	420.55 ± 14.98 (7093)	10.98 ± 1.43 (7093)	12.91 ± 1.35 (7093)	223.59 ± 7.33 (7093)
Year of birth	**	**	**	**	**
2020	266.42 ± 13.55 (1096)	409.09 ± 3.40 (1096)	9.71 ± 0.12 (1096)	12.04 ± 0.15 (1096)	227.64±0.43 (1096)
2021	268.57 ± 4.33 (924)	411.55 ± 5.62 (924)	9.82 ± 0.37 (924)	12.62 ± 0.27 (924)	224.98±0.77 (924)
2022	270.34 ± 17.18 (2028)	418.98 ± 18.25 (2028)	11.27 ± 1.98 (2028)	12.59 ± 1.47 (2028)	220.34±10.74 (2028)
2023	276.50 ± 14.61 (1389)	425.03 ± 20.42 (1389)	11.56 ± 2.87 (1389)	13.48 ± 3.48 (1389)	221.88±12.37 (1389)
2024	279.83 ± 23.58 (1656)	432.86 ± 25.56 (1654)	11.79 ± 1.73 (1656)	13.47 ± 1.47 (1656)	224.30±12.37 (1656)
***P<0.01, *P<0.05*					

*Value in parenthesis are number of observations

Table 2: Least square means of body weight (kg) in Black Bengal goats at different ages

Factor	Body weight at different ages (kg)				
Overall Mean	Birth	3 Month	6 Month	9 Month	12 Month
	1.33±1.24 (15759)	4.16±2.10 (13416)	6.51±1.85 (11032)	8.80±3.99 (7740)	11.41±4.15 (4007)
Year of birth	**	**	**	**	**
2020-21	1.33^{c}±0.44 (1965)	4.19^{d}±2.83 (1634)	6.21^{b}±1.13 (1418)	7.99^{b}±4.23 (1058)	10.86^{c}±4.39 (754)
2021-22	1.35^{c}±0.17 (2855)	4.11^{c}±4.11 (2642)	6.23^{b}±3.39 (2348)	8.02^{b}±7.79 (1682)	10.90^{c}±4.77 (702)
2022-23	1.30^{b}±3.78 (2911)	3.88^{b}±2.10 (2745)	6.47^{c}±2.35 (2214)	8.68^{c}±5.07 (1522)	11.06^{c}±7.13 (648)
2023-24	1.33^{b}±0.70 (4894)	4.00^{b}±0.67 (4484)	6.75^{c}±1.22 (3711)	9.11^{d}±1.51 (2539)	11.65^{d}±2.52 (1293)
2024-25	1.38 ^{c}±0.26 (3134)	4.65^{b}±0.96 (1911)	7.10^{c}±2.42 (1341)	10.20^{d}±1.31 (939)	12.60^{d}±2.27 (610)

*Value in parenthesis are number of observations

Table 3: Lactation performance of Black Bengal goats over the years

Factor	90 days and total milk yield	
Overall Mean	90d milk yield (L)	Total milk yield (L)
	21.47±0.33 (3594)	22.87±0.87 (3594)
2020-21	20.85^{a}±0.23 (544)	22.23^{a}±0.69 (544)
2021-22	20.88^{a}±0.47 (558)	22.49^{a}±1.47 (558)
2022-23	21.45^{b}±0.31 (946)	22.92^{b}±0.92 (946)
2023-24	22.51^{c}±0.33 (1066)	23.14^{b}±0.65 (1066)
2024-25	22.78^{c}±0.33 (480)	23.35^{c}±0.63 (480)

*Value in parenthesis are number of observations

Table 4: Mortality rate in different age groups over the year

Mortality	Birth-3Month		3-6 Month		6-12 Month		Adult		Total
	M	F	M	F	M	F	M	F	Deaths (%)
2020-21	0.9		0.65		0.48		1.75		3.79
2021-22	0.7		0.43		0.38		0.55		2.07
2022-23	0.84	0.95	0.29	0.29	0.31	0.35	0.28	0.3	3.61
2023-24	0.49	0.42	0.27	0.28	0.36	0.5	0.41	0.42	3.15
2024-25	0.81	0.89	0.25	0.35	0.27	0.38	0.43	0.56	3.97

7. Beetal Field Unit, GADVASU Veterinary & Animal Sciences University, Ludhiana, Punjab

PI: Dr. Arunbeer Singh, Assistant Professor (Extension)



The Beetal Goat Field Unit was established in 2020 at GADVASU, Ludhiana, and enrolled as a funding unit from 2022. A total of 1198 goats were covered under the project during 2024-25, for breed improvement (498) and grading up (700). The average litter size average was 1.45. The percentage of single births, twins and triplets was 43%, 52% and 5% respectively. Least squares means for average age at first mating (AFM), weight at first mating (WFM), age at first kidding (days), weight at first kidding (AFK) and first kidding interval (FKI) were 737.93±24.0days, 32.77±0.59kg, 885.25±29.0days, 43.24±0.65kg and 371.0±30.0days, respectively. The least square mean of body weight (kg) of kids at birth, 3 months, 6 months, 9 months and 12 months was 4.12±0.021, 13.39±0.024, 18.39±0.367, 23.79±0.36 and 30.09±0.36kg, respectively. The average milk yield of the goats recorded in 90 days was 110.02±1.51 (kg). The overall mortality was 3.56%.

Table 1: Reproductive performance in Beetal goats

Reproductive Performances		
S. No	**Traits**	**2023-24**
1	Age at first Mating (days)	737.93±24
2	Weight at first mating (Kg)	32.776±0.59
3	Age at first kidding (days)	885.25±29.0
4	Weight at first kidding (Kg)	43.24 ± 0.65
5	First kidding Interval (days)	371.0±30.0

Table 2: Least square means of body weight (kg) in Beetal goats at different ages

Factor	Body weight at different ages (kg)				
	Birth	3 Month	6 Month	9 Month	12 Month
Overall Mean	4.12 ± 0.02	13.39 ± 0.02	18.39 ± 0.36	23.79 ± 0.36	30.09 ± 0.36
Year of Birth					
2025	4.12 ± 0.02	13.39 ± 0.02	18.39 ± 0.36	23.79 ± 0.36	30.09 ± 0.36
Season of Birth					
I	4.12 ± 0.02	13.39 ± 0.02	18.39 ± 0.36	23.79 ± 0.36	30.09 ± 0.36
II	-	-	-		
Sex of Kid					
Male	4.27 ± 0.05	15.76 ± 0.19	21.06 ± 0.718	26.46 ± 0.71	32.76±0.718
Female	3.62 ± 0.06	13.23 ± 0.17	17.54 ± 0.0.64	22.94 ± 0.64	29.24±0.64
Type of Birth					
Single	4.13 ± 0.05	15.02 ± 0.15	19.68 ± 0.59	25.08 ± 0.59	31.38±0.59
Twin	4.07 ± 0.04	14.78 ± 0.11	19.42 ± 0.44	24.82 ± 0.44	31.12±0.44
Triplet	3.63 ± 0.10	13.69 ± 0.43	18.36 ± 0.75	23.146±0.750	30.06±0.75

Table 3. Mortality rate over the years

Year	2022-23	2023-24	2024-25
Flock Strength	885	2423	2299
Goat Died	93	228	82
Mortality (%)	10.50%	9.40%	3.56%

8. Bundelkhandi Goat Field Unit, Indian Grassland and Fodder Research, Jhansi, Uttar Pradesh

PI: Dr. B P Kushwaha, Principal Scientist (AG&B)



The Bundelkhandi Goat Field Unit was stated in May 2018 at the ICAR–IGFRI, Jhansi (U.P). As a significant achievement of AICRP that Bundelkhandi goat was officially registered as a distinct breed by the Breed Registration Committee of the ICAR on January 6, 2025, under Accession Number INDIAN_GOAT_2010_BUNDELKHANDI_06041. The opening and closing balance of Nucleus flock on 01-04-24 and 31-03-2025 was 106 and 102. Currently, the AICRP unit on Bundelkhandi goat is active with six clusters. During the year 2024–25, a total of 135 households were enrolled under the project, with 3180 goats. The flock size ranged from 5 to 70 animals, with an average size of 23.73. To strengthen the breeding program, 21 breeding bucks were distributed among goat-keeping households in the adopted villages, while 5 does were provided to multiplier flocks. Least squares mean for average age at first mating (AFM), weight at first mating (WFM), age at first kidding (AFK), weight at first kidding (AFK) and first kidding interval (FKI) were 398.84±17.42days, 21.30±0.82kg, 545.21±17.4days, 24.34±0.89kg, 252.05±8.70days, respectively. The average body weights at birth, 3, 6, 9 and 12-month age were 2.28±0.05, 9.18±0.18, 13.40±0.44, 17.62±0.15, and 19.66±0.26kg, respectively. The least square means for 90 days milk yield, total milk yield and lactation length of goats kidded

in 2024-25 was 42.35±2.40litre, 50.80±4.60litre and 109.00±8.60days, respectively. The average daily milk yield recorded was 477.42±12.49ml/day, and the average kidding percentage was 89.57%. The overall mortality was 8.68%. Additionally, 06 Kisan Gosthi-cum-Animal Health Camps were conducted to raise awareness about the scientific goat rearing and health management practices. A success story has been document, and one paper published.

Table 1: Reproductive performance in Bundelkhandi goats

Reproductive Performance (s)		
S. No.	**Traits**	**Average**
1	Age at first mating (days)	398.84±17.42 (25)
2	Weight at first mating (kg)	21.3±0.82 (25)
3	Age at first kidding (days)	545.21±17.4 (25)
4	Weight at first kidding (kg)	24.34±0.89 (25)
5	Kidding interval (days)	252.05±8.70 (25)

*Value in parenthesis are number of observations

Table 2: Least square means of body weight (kg) in Bundelkhandi goats at different ages

Factor	Body weight at different ages (kg)				
Overall Mean	Birth	3 Month	6 Month	9 Month	12 Month
	2.29±0.06 (294)	9.46±0.22 (645)	13.44±0.33 (686)	17.49±0.30 (707)	20.09±0.30 (696)
Year of birth	**	**	**	**	**
2020-21	2.22±0.04 (83)	9.55 ± 0.13 (90)	12.48±0.29 (36)	17.16 ±0.30 (36)	20.19±0.35 (36)
2021-22	2.29±0.05 (56)	9.36±0.20 (123)	13.58±0.33 (72)	17.39±0.75 (85)	20.02±0.25 (124)
2022-23	2.35±0.07 (50)	9.41±0.27 (151)	13.82±0.28 (201)	17.58±0.29 (272)	20.00±0.37 (179)
2023-24	2.32±0.08 (49)	9.82±0.33 (162)	13.90±0.32 (213)	17.70±0.35 (135)	20.60±0.28 (170)
2024-25	2.28±0.05 (56)	9.18±0.18 (119)	13.40±0.44 (164)	17.62±0.15 (179)	19.66±0.26 (187)

*Value in parenthesis are number of observations

Table 3: Lactation performance of Bundelkhandi goats over the years

Factor	Milk Yield of different Lactation traits		
Overall Mean	90d milk yield (L)	Total milk yield (L)	Lactation length (d)
	43.59 ±2.50 (346)	49.36±3.30 (200)	98.54±6.63 (176)
2020-21	42.74 ±2.37 (13)	54.13 ±2.47 (16)	102.6±5.05 (16)
2021-22	45.37±1.85 (107)	51.79±3.77 (38)	102.7±7.47 (38)
2022-23	41.99±3.07 (100)	43.38±3.17 (40)	90.71±6.63 (40)
2023-24	45.51±2.80 (41)	46.71±2.51 (41)	87.68±5.39 (41)
2024-25	42.35±2.40 (85)	50.80±4.60 (65)	109.00±8.6 (41)

*Value in parenthesis are number of observations

Table 4. Mortality rate over the years

S. No.	Particulars	2020-21	2021-22	2022-23	2023-24	2024-25
1	No. of animals available	1456	1928	1666	1743	3812
2	No. of animals died	198	121	217	129	331
3	Mortality (%)	13.59	6.27	13.02	7.40	8.68

9. Changthangi Field Unit, Sher-e-Kashmir University of Agriculture Science and Technology-Kashmir, Jammu & Kashmir

PI: Dr Feroz Din Sheikh Professor cum Chief Scientist (AGB)



The AICRP on Goat Improvement (Changthangi) was initiated on 1st April 2014 at HMAARI, SKUAST-K Leh, now operating under Krishi Vigyan Kendra (KVK), SKUAST-Leh. The project aims to improve pashmina fiber quality and meat traits in Changthangi goats. Currently, 9 villages are included under the project, covering a total of 18,288 goats managed by 83 beneficiaries. The opening balance for the year was 15171 and closing balance was 18288. During 2024–2025, the goat population increased by 11.33%, driven by the inclusion of three new villages. Kidding percentage stood at 69.4%, with 2,408 kids born. Least squares mean for average age at first service (AFS), age at first kidding (AFK) and first kidding interval (FKI) were 556±13.47days, 716±0.14 days and 357±0.14days, respectively. The average body weight at birth, 3 months, 6 months, 9 months and 12 months were 2.38±0.09, 6.60±0.11, 9.78±0.13, 13.43±0.25 and 17.56±0.30 Kg, respectively. Pashmina yield averaged 337.7 g/goat/year across villages, ranging from 200g to 500g. Quality analysis of 325 samples showed an average fiber diameter of 15.23 microns and length of 60.28 mm. A nucleus herd of elite bucks has been established at KVK-Leh, and 12 bucks were distributed to 3 clusters in 2024 for breed improvement. Ten hectares of land were cultivated with alfalfa, and silage production. Over 23,000 goats were treated and dosed under the health management program, and 9,464 were vaccinated against major diseases. Sixteen training programs were conducted, benefiting 190 pastoralists. Capacity building initiatives included a 7-day training on pashmina spinning in collaboration with MSME and a hands-on program on pashmina goat management. Women's groups and local entrepreneurs have also been actively linked to value-added pashmina initiatives. Qualitative milk analysis showed that 100 ml of Changthangi goat milk contains 4.6g carbohydrates, 4.82g protein, 4g fat, and 140.8mg calcium. Fecal examination of 366 samples across project villages revealed Eimeria spp. (45%) as the most prevalent gastrointestinal parasite, followed by Nematodrius, Strongyloides, Moniezia, and mite eggs. The project continues to promote sustainable goat production and value addition in the Ladakh through community-based genetic improvement, fodder innovation, health interventions, and capacity building.

Table 1: Reproductive performance in Changthangi goats over the years

Factor	Reproductive Performance (s)		
Overall Mean	Age at first Service (d)	Age at first kidding (d)	First Kidding Interval (d)
	557.89±12.36	710±1.74	358±0.47
Year	*	*	**
2020	555.26±21.02	704.38±2.11	361±1.16
2021	557.27±10.2	707.13 ±3.12	360±0.13
2022	559.12±12.6	710±0.58	357±0.15
2023	558.38±11.64	714±0.72	358±0.17
2024	556.00±13.47	716±0.14	357±0.14
***P<0.01, *P<0.05*			

Table 2: Least square means of body weight (kg) in Changthangi goats at different ages

Factor	Body weight at different ages (kg)				
Overall Mean	Birth	3 Month	6 Month	9 Month	12 Month
	2.29±0.08	6.41±0.15	9.49±0.25	13.26±0.15	17.1±0.34
Year of birth	**	**	**	**	**
2020-21	2.18±0.11	6.30±0.21	9.32±0.11	13.16±0.01	16.55±0.12
2021-22	2.20±0.01	6.23±0.01	9.34±0.02	13.19±0.11	16.75±0.01
2022-23	2.32±0.12	6.37±0.15	9.46±0.13	13.21±0.17	17.01±0.13
2023-24	2.36±0.13	6.55±0.15	9.58±0.16	13.31±0.16	17.42±0.14
2024-25	2.38±0.09	6.60±0.11	9.78±0.13	13.43±0.25	17.56±0.30

Table 3. Pashmina production for the last five years (2020–2024)

Cluster / Village	Year	No. of Animals Combed (Male)	Average Yield	No. of Animals Combed (Female)	Average Yield
Kharnek	2020	1570	290±11.14	1330	262±13.33
	2021	1655	295±10.21	1450	270±11.13
	2022	387	268±10.15	337	258±12.75
	2023	319	266±11.09	285	259±12.55
	2024	3038	284±9.58	2709	270±6.77
Samad	2020	1650	257±8.16	1459	243±9.45
	2021	1530	254±10.13	1340	242±11.31
	2022	1556	512±11.14	1450	343±12.24
	2023	1364	523±8.64	1290	355±9.27
	2024	1831	542±9.85	1705	370±8.55
Gia	2020	313	274±8.37	62	212±14.56
	2024	520	342±7.60	682	267±8.82
Chumurthang	2020	459	306±8.14	104	292±12.73
	2023	465	274±7.37	354	221±6.59
Nidar	2020	345	245±8.70	213	223±8.84
	2022	375	206±12.37	433	185±10.54
	2023	320	234±11.35	388	200±8.52
	2024	334	256±12.33	459	234±9.68
Gyaltse Nomad	2023	1200	354±12.15	1126	274±8.9
	2024	1505	374±13.42	1234	283±11.76
Demchok	2024	310	316±14.19	800	216±8.54
Koyul	2024	310	316±14.19	360	216±8.54
Hanle	2024	661	340±9.14	1120	332±10.3

Table 4. Mortality rate over the years

Year	2020–21	2021–22	2022–23	2023–24	2024–25
Flock Strength	15,580	16,692	14,088	15,171	13,145
Goat Died	901	998	1,601	1,270	3,318
Mortality (%)	6.4	5.89	11.36	8.3	25.24

10. Gaddi Goat Field Unit, CSK Himachal Pradesh Krishi Vishvavidyalaya, Palampur, Himachal Pradesh

PI: Dr. Nishant Verma, Assistant Professor (AGB)



The AICRP on Goat Improvement (Gaddi Unit) was sanctioned to this center on 17th February 2009. The opening balance as on 01.04.2024 was 1692 goats including 1189 breedable does. During the year, a total of 1077 young kids were added by way of birth, 207 animals died and 927 animals were sold by the owners. The opening balance of stock as on 31.03.2024 was 1723 and the closing balance as on 31.03.2025 was 3067 animals under different age groups. Average of age at first kidding (AFK), weight at first kidding (AFK) and first kidding interval (FKI) were 22.80±0.22month, 29.30±0.45kg, 235.40±2.40days, respectively. The least square means of body weights at birth, 3 month, 6-month, 9 month and 12 months of age were 3.12±0.22, 16.18±0.19, 21.84±0.20, 25.90±0.27 and 29.76±0.16 Kg, respectively. A total of 13 males were distributed to 13 farmers as a breeding input. Further we supplied 20 gaddi goat units (1M: 3F) (80 animals) from AICRP adopted multiplier flocks, under (ICAR-SCSP), for grading up and genetic improvement of non-descript goats. All selected animals were provided health coverage under migratory field conditions viz. vaccination against PPR, (9861),

de-worming against endo-parasites after faecal sample analysis, periodic health check-ups etc. Strategic supplementary feeding was also provided in the form of concentrate feed (71qtls.) and mineral mixture (3qtlls). Three multiplier flocks were established with 520 animals. The income per goat per year was Rs.8,000/- only. The overall mortality was 6.74%. The incidence of twin birth was 11.6% and litter size 1.42. The overall abortion incidence in the flocks was 5.8%. The breeding efficiency or fertility percent on the basis of does available was 70.24% and on the basis of does tupped was 89.60% respectively. The kidding percent were on the basis of does available was 57.03 and on the basis of does tupped was 81.16 respectively.

Table 1: Reproductive performance in Gaddi goats

Reproductive Performances		
S. No.	**Traits**	**Average**
1	Age at first kidding (Months)	22.80±0.22 (31)
2	Weight at first kidding (kg)	29.30±0.45 (30)
3	Kidding interval (days)	235.40±2.40 (27)
4	Milk Yield (90 days) in liters	50.47± 2.23 (19)

*Value in parenthesis are number of observations

Table 2: Least square means of body weight (kg) in Gaddi goats at different ages

Factor	Body weight at different ages (kg)				
	Birth	3 Month	6 Month	9 Month	12 Month
Overall Mean	3.12±0.03 (1636)	15.96±0.12 (1324)	21.29±0.10 (728)	25.46±0.19 (613)	29.12±0.18 (473)
Years					
2020-21	3.12±0.02 (218)	15.54±0.07 (188)	19.88±0.09 (125)	24.80±0.14 (128)	27.83±0.24 (46)
2021-22	3.13±0.02 (338)	15.95±0.05 (434)	21.41±0.13 (249)	25.12±0.10 (143)	29.32±0.23 (120)
2022-23	3.13±0.06 (307)	16.12±0.19 (193)	21.92±0.21 (142)	25.82±0.12 (159)	29.62±0.18 (86)
2023-24	3.12±0.03 (277)	16.02±0.17 (220)	21.39±0.11 (59)	25.67±0.18 (56)	29.08±0.06 (80)
2024-25	3.12±0.22 (490)	16.18±0.16 (289)	21.84±0.20 (153)	25.90±0.27 (127)	29.76±0.16 (141)

*Value in parenthesis are number of observations

Table 3: Mortality rate over the years

Year	2020-21	2021-22	2022-23	2023-24	2024-25
Flock strength	1602	1747	1716	1723	3067
Goat died	95	116	110	118	207
Mortality (%)	5.93	6.63	6.41	6.84	6.74

11. Ganjam Goat Field Unit, College of Veterinary Science & Animal Husbandry, OUAT, Bhubaneswar, Odisha

PI: Dr. Chinmoy Mishra, Assistant Professor (AGB)



The project is operational at Department of Animal Breeding and Genetics in College of Veterinary Science and Animal Husbandry, OUAT, Bhubaneswar from the year 2001-02. The field unit operated at four different clusters with 100 numbers of registered goat farmers at Chhatrapur, Rambha, Khallikote and Jiirabadi in Ganjam district. The total available goat populations with registered farmers were 2775 with 761 from Chhatrapur center, 574 from Rambha center, 832 from Khallikote center and 608 from Jirabadi center. The opening flock strength was 2478 and closing flock strength was 2775 for this year. The population growth during the current year was 76.51%. Average mean of age at first heat (day), age at first kidding (day), weight at first kidding

(kg) and kidding interval were 395.63±3.01days, 599.29±5.8days, 22.11±0.08kg and 223.68±1.43days, respectively. Kidding percentage was around 88.88%. The means of body weights of goats were 2.93±0.03, 7.35±0.08, 11.24±0.14, 15.38±0.13 and 18.84±0.17kg at birth, 3, 6, 9 and 12 month of age, respectively. The milk yield at 30 and 60 days was 8.61±0.11litre and 15.17±0.11litre. The improvement in body weights at 9-month age and one year age has been 3.27 kg and 6.78 kg, respectively as compared to the base year of 2001-02. A total of 57 adult elite bucks of around one and half years of age with (Selection differential of +4.0 kg at 9 months age) higher body weight than the average of the flock at 9-month stage were distributed among the goat farmers. A total of two Gosthi meetings and eleven farmers' training programme were organized for the goat farmers benefitting around 252 farmers. A total of 4000 dosages of vaccinations were done against PPR and Goat pox and 9238 deworming dosages were administered. A total of 2591 goats were treated and so were 277 other animals in this year. A total of four vaccination camps and twelve health camps were organized. Kid mortality was 5.9 percent only. The average income of goat farmers has improved by around 8.43% (Rs 13,970/-) in the last years to around Rs 179646.98. Four post graduate research work was facilitated to evaluate genetic merit of the Ganjam goats. Four research publications were brought out.

Table 1: Reproductive performance in Ganjam goats

Factor	Reproductive Performance (s)			
Overall Mean	Age at first heat (d)	Age at first kidding (d)	Wt. at first kidding (kg)	Kidding Interval (d)
	404.28 ± 2.62 (180)	598.57 ± 4.91(140)	21.8 ± 0.22 (96)	229.05 ± 1.12 (652)
Year	*	*	**	**
2020	410.45 ± 6.18 (33)	600.01 ± 13.47 (33)	21.02 ± 0.89 (13)	226.48 ± 1.57 (133)
2021	412.67 ± 5.78 (43)	600.50 ±14.08 (26)	22.92 ± 0.34 (30)	241.45 ± 1.16 (209)
2022	394.24 ± 8.06 (25)	586.88 ±16.41 (17)	19.4 ± 0.5 (14)	218.44 ± 2.94 (112)
2023	405.36 ± 6.33 (38)	601.64 ± 6.54 (24)	21.96 ± 0.36 (17)	222.06 ± 4.04 (112)
2024	395.63 ± 3.01 (41)	599.29 ± 5.8 (40)	22.11 ± 0.08 (22)	223.68 ± 1.43 (121)
***P<0.01, *P<0.05*				

*Value in parenthesis are number of observations

Table 2: Least square means of body weight (kg) in Ganjam goats at different ages

Factor	Body weight at different ages (kg)				
	Birth	3 Month	6 Month	9 Month	12 Month
Overall Mean	2.88±0.01 (3633)	7.7±0.05 (2455)	11.11±0.06 (1645)	14.78±0.07 (1266)	18.63±0.14 (1035)
Year	**	**	**	**	**
2020-21	2.84±0.03 (576)	8.72±0.1 (354)	12.06±0.12 (286)	15.33±0.13 (177)	18.56±0.16 (21)
2021-22	2.91±0.03 (491)	7.44±0.1 (310)	10.67±0.12 (256)	14.29±0.12 (215)	18.76±0.16 (237)
2022-23	2.87±0.02 (1081)	7.49±0.07 (862)	10.93±0.09 (651)	14.05±0.09 (557)	18.39±0.14 (466)
2023-24	2.83±0.02 (622)	7.49±0.09 (416)	10.65±0.12 (191)	14.87±0.11 (191)	18.56±0.35 (122)
2024-25	2.93±0.02 (862)	7.35±0.08 (513)	11.24±0.14 (261)	15.38±0.13 (126)	18.84±0.17 (89)

*Value in parenthesis are number of observations

Table 3: Lactation performance of Ganjam goats over the years

Factor	Milk Yield of different Lactation traits	
Overall Mean	30d milk yield (Kg)	60d milk yield (Kg)
	7.25±0.20	13.48±0.20
2020-21	7.63±0.17 (97)	13.75±0.39 (97)
2021-22	8.03±0.15 (100)	14.34±0.30 (100)
2022-23	8.49±0.26 (32)	15.33±0.45 (32)
2023-24	8.56±0.32 (70)	15.17±0.55 (70)
2024-25	8.61±0.11 (82)	15.17±0.11 (82)

*Value in parenthesis are number of observations

Table 4: Mortality rate over the years

Year	2020-21	2021-22	2022-23	2023-24	2024-25
Flock Strength	5827	6029	1052	3170	3533
Goats Died	174	199	33	136	146
Mortality (%)	2.98	3.30	3.13	4.29	4.13

12. Chaugarkha (Himalayan) Goat unit, Indian Veterinary Research Institute, Mukteswar, Nainital, Uttarakhand

PI: Dr. Indrasen Chauhan, Sr. Scientist (AGB)



AICRP (Chaugarkha goat unit) is located at ICAR-IVRI, Mukteshwar, Nainital, Uttarakhand. Recently, Chaugarkha has been registered by ICAR-NBAGR with Accession number 'INDIA_GOAT_2400_ CHAUGARKHA_06040'. Chaugarkha goat is medium size meat breed, reared mainly by landless, small and marginal farmers of the Kumaon region of Uttarakhand. New villages/clusters were adopted and some old villages/clusters were dropped as per proceedings of the 21st Annual Review Meet. The opening and closing balance of Field flock on 01-04-24 and 31-03-2025 was 788 and 672. Least squares mean for average age at first service (days), age at first kidding (AFK), weight at first service (WFS), weight at first kidding (AFK) and first kidding interval (FKI) were 394.58±15.12days, 544.50±14.68days, 18.56±0.18kg, 20.66±0.13kg and 314.42±78.94days, respectively. The least squares mean of body weights (kg) in nucleus farm at birth, 3, 6, 9 and 12 months were 1.92±0.03, 9.17±0.27, 12.97±0.45, 16.96±0.49, 18.14±0.76, respectively. For the field, the least squares mean of body weights (kg) at birth, 3, 6, 9 and 12 months were 1.65±0.12, 6.02±0.32, 10.24±0.87, 14.17±0.11, 17.05±0.24, respectively. The milk yield at 60 days was 36.34±1.01, respectively. Three animal health camps organized under AICRP. The overall mortality was 3.89%. A five-day training programme was organized in which 21 farmers from Nata Dol village, Lamgara block, Almora district was trained Pea-3 quintals, fawdas-513, lime-89 bags of 25 kg each, gardening kit-50, Agrimin forte-70 bags of 1kg each, electronic weighing balance-02, anthelmintic and medicines inputs were provided to the farmers. A Revenue of Rs 154282.5 was generated from the sale of Chaugarkha goats.

Table 1: Reproductive performance in Chaugarkha (Himalayan) goats

Factor	Reproductive Performance (s)				
Overall Mean	Age at first Service (d)	Age at first kidding (d)	Wt. at first Service (kg)	Wt. at first kidding (kg)	First Kidding Interval (d)
	364.67±56.89 (58)	513.05±52.55 (58)	17.12±0.70 (58)	20.48±0.5 (58)	257.35±73.90 (58)
Year of birth		**	*	**	**
2020-21	346.13±14.99 (15)	495.67±15.65 (15)	15.62±0.46 (15)	18.26±0.49 (15)	231.93±55.40 (15)
2021-22	353.30±17.73 (10)	502.20±18.65 (10)	18.15±0.53 (10)	21.61±0.47 (10)	253.40±64.42 (10)
2022-23	373.27±30.54 (11)	519.55±29.61 (11)	15.98±0.31 (11)	18.32±0.14 (11)	240.50±88.07 (11)
2023-24	358.80±25.50 (10)	505.10±25.44 (10)	17.88±0.64 (10)	20.60±0.60 (10)	247.80±61.86 (10)
2024-25	394.58±15.12 (12)	544.50±14.68 (12)	18.56±0.18 (12)	20.66±0.13 (12)	314.42±78.94 (12)
***P<0.01, *P<0.05*					

*Value in parenthesis are number of observations

Table 2: Least square means of body weight (kg) in Chaugarkha goats at different ages

Factor	Body weight at different ages (kg)				
	Birth	3 Month	6 Month	9 Month	12 Month
Overall Mean	1.80±0.04 (638)	8.02±0.51 (604)	12.03±0.45 (554)	15.70±0.41 (486)	19.19±0.54 (462)
Year	**	**	**	**	**
2020-21	1.80±0.03 (77)	8.18±0.17 (76)	12.23±0.24 (54)	15.91±0.51 (44)	19.52±0.80 (42)
2021-22	1.78±0.04 (123)	8.35±0.21 (120)	12.51±0.35 (115)	15.71±0.50 (80)	20.10±0.37 (76)
2022-23	1.90±0.06 (130)	8.75±0.32 (115)	12.64±0.35 (105)	16.11±0.45 (95)	19.57±0.14 (82)
2023-24	1.88±0.19 (115)	8.80±0.47 (110)	12.51±0.28 (106)	16.61±0.50 (98)	19.69±0.33 (95)
2024-25	1.65±0.12 (193)	6.02 ±0.32 (183)	10.24± 0.87 (174)	14.17±0.11 (169)	17.05±0.24 (167)

*Value in parenthesis are number of observations

Table 3: Lactation performance of Chaugarkha goats over the years

Trait	2020-2021	2021-2022	2022-23	2023-24	2024-25
60-days milk yield (lit/kg)	22.3±40	22.5±0.52	21.90±0.41	20.40±0.23	36.34±1.01*

Table 4. Mortality rate over the years

Year	2020-21	2021-22	2022-23	2023-24	2024-25
Flock Strength	257	382	422	428	926
Goat died	7	8	11	14	36
Mortality (%)	2.72	2.09	2.61	3.27	3.89

13. Malabari Goat Field Unit, Kerala Veterinary and Animal Sciences University, Mannuthy, Thrissur, Kerala

PI: Dr. R Thirupathy Venkatachalapathy, Professor (AGB)



Malabari goat field unit under AICRP on Goat Improvement was initiated in April 2001. The unit operates through six clusters: Taliparamba, Thalassery, Vadakara, Perambra, Kottakkal, and Tanur located in Kannur, Kozhikode, and Malappuram districts of northern Kerala. The opening and closing balance of field flock on 01-04-24 and 31-03-2025 was 3525 and 4312. A nucleus flock of 130 goats is maintained at Goat and Sheep Farm, Mannuthy, Thrissur. Five multiplier flocks established in Thrissur, Palakkad, and Malappuram. A total of 261 farmers (178 women) has been registered and supported with breeding inputs, feed supplements, and health coverage. In 2024-25, 1150 kids were born from 724 kiddings with 582 female kids. Overall population growth was 92.5%, and 21.13% of animals were sold. Least squares mean for average age at first service (AFS), age at first kidding (AFK), weight at first service (WFS), weight at first kidding (AFK) and Kidding interval (KI) were 246.20±12.20 days, 395.10±12.50 days, 22.30±1.40 kg, 26.30±1.40 kg, and 274.50±12.70days, respectively. Body weights (kg) at birth, 3, 6, 9, and 12 months were 2.48±0.21, 9.05±0.25, 16.10±0.26, 23.25±0.28, and 24.95±1.32, respectively. The least square means for 30, 60, 90, total milk yield and lactation length of goats kidded in 2024-25 was 36.75±1.90, 65.50±2.55, 80.60±5.20, 80.60±5.20 litres and 87.05±4.70 days, respectively. Kidding rate was 1.68. Multiple births were highest at Kottakkal (72.58%). Mortality rate was 3.25%. A total of 73 bucks were distributed and 24800 kg of concentrate feed and 1056 kg supplements provided. Seven TSP villages were covered. Seven trainings benefited 446 farmers. Five research papers and 2 thesis were completed. Two PhD and two MVSc student work completed. Two success stories documented. Net return per goat/year was Rs. 16,520.

Table 1: Reproductive performance in Malabari goats

Factor	Reproductive Performance (s)				
Overall Mean	Age at first service (d)	Age at first kidding (d)	Wt. at first service (kg)	Wt. at first kidding (kg)	first kidding interval (kg)
2020-21	250.10±11.10 (577)	399.20±12.30 (242)	19.50±1.30 (577)	23.50±1.35 (242)	275.80±12.6 (526)
2021-22	245.10±12.10 (544)	394.20±12.30 (256)	19.80±1.35 (544)	23.90±1.40 (256)	274.50±12.60 (524)
2022-22	246.25±1.40 (576)	390.31±1.70 (261)	20.40±1.30 (576)	24.30±1.30 (261)	276.81±12.5 (564)
2023-24	255.20±12.10 (591)	392.03±12.6 (260)	21.30±1.30 (591)	25.20±1.30 (260)	275.81±12.60 (572)
2024-25	246.20±12.20 (586)	395.10±12.50 (253)	22.30±1.40 (586)	26.30±1.40 (253)	274.50±12.70 (546)
***P<0.01, *P<0.05*					

*Value in parenthesis are number of observations

Table 2: Least square means of body weight (kg) in Malabari goats at different ages

Factor	Body weight at different ages (kg)				
	Birth	3 Month	6 Month	9 Month	12 Month
Overall Mean	2.43±0.20 (5232)	8.96±0.30 (3258)	15.85±0.35 (2028)	23.01±0.66 (1595)	24.66±1.25 (1439)
Year	**	**	**	**	**
2020-21	2.38±0.01 (967)	8.90±0.14 (785)	15.50±0.14 (559)	22.78±0.67 (348)	23.90±1.40 (319)
2021-22	2.39±0.04 (1179)	8.93±0.16 (602)	15.74±0.16 (339)	22.95±0.65 (308)	24.73±1.23 (262)
2022-23	2.43±0.05 (1100)	8.90±0.20 (609)	15.90±0.26 (340)	22.98±033 (320)	24.80±1.10 (280)
2023-24	2.45±0.20 (996)	8.95±0.30 (635)	16.02±0.20 (383)	23.10±0.30 (335)	24.90±1.30 (314)
2024-25	2.48±0.21 (990)	9.05±0.25 (627)	16.10±0.26 (407)	23.25±0.28 (284)	24.95±1.32 (264)

*Value in parenthesis are number of observations

Table 3: Lactation performance of Malabari goats over the years

Factor	N	60d milk yield (L)	90d milk yield (L)	Total milk yield (L)	Lactation length (d)
Overall Mean	1358	64.05±2.89	79.35±5.08	79.35±5.58	85.50±5.01
Year of Kidding		**	**	**	**
2020-21	319	63.50±3.10	77.50±5.80	77.50±5.80	85.30±5.50
2021-22	262	64.50±3.20	78.90±4.25	78.90±5.72	85.40±5.60
2022-23	250	64.78±2.34	78.98±4.35	78.95±5.38	85.24±4.38
2023-24	262	64.90±2.50	79.50±5.10	79.50±5.10	86.20±4.60
2024-25	265	65.50±2.55	80.60±5.20	80.60±5.20	87.05±4.70

Table 4: Mortality rate in different age groups over the years

Year	Young Mortality (%)								Adult Mortality (%)		Overall Mortality
	0-3m		3-6 m		6-9 m		9-12 m		M	F	
	M	F	M	F	M	F	M	F			
2020-21	5.01	2	8.28	3.14	5.61	0.46	6.67	0.52	3.17	3.11	3.27
2021-22	6.87	3.94	11.9	5.47	3.51	1.29	3.7	0.97	2.27	2.04	3.93
2022-23	11.29	3.88	17.48	5.56	9.52	1.01	6.72	1.13	6.67	2.52	5.23
2023-24	3.68	1.9	6.69	2.57	5.56	0.61	5.22	0.34	4.62	1.9	2.63
2024-25	4.74	4.18	4.29	2.9	4.83	1.29	0.95	0.34	7.69	1.44	3.25

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

PI: Dr Virendra Kumar, Assistant professor (AGB)



The Marwari Field unit, as a part of the AICRP goat improvement project is functioning at RAJUVAS, Bikaner from 1988. Opening and closing stock at Nucleus farm was 157 and 177; and in field flock it was reported as 3744 and 3251. Operational clusters are located at Daiya, Kalayansar, Raisar (Bikaner district) and Kan Singh Ki Sird (Jodhpur district) with a distance of 10, 20 and 120 km away from headquarter, respectively. A total of 78 farmers have been registered under the unit. The 21 new bucks were distributed to registered farmers in adopted areas for breeding improvement. Least squares means for average age at first service (AFS), age at first kidding (AFK), weight at first service (WFS), weight at first kidding (AFK) and Kidding interval (KI) were 381.0±2.55days, 538.0±3.12days, 23.8±0.12kg, 28.6±0.30kg, and 338.0±2.16days, respectively. The least squares means of body weights (nucleus flock) at birth, 3, 6, 9 and 12 month age were 2.74±0.014, 9.29±0.167, 14.35±0.358, 17.76±0.576 and 22.31±0.857 kg, respectively. The least squares means of body weights (field unit) at birth, 3, 6, 9 and 12 month age were 2.70±0.008, 8.62±0.015, 14.62±0.007, 18.66±0.013, 23.64±0.086kg, respectively. The average milk yield at 60 days, 90 days, total milk yield and lactation length was 61.63±0.325liters, 82.56±0.462liters, 90.15±0.0564liters and 108.65±0.305days,

respectively during 2024-25. The kidding percentage and kidding rate was 97.62% and 1.05, respectively. Mortality rate was 3.56%. Two Multiplier flocks with flock strength of 156 were developed. Income per goat/year was found as 3631 Rs. Four trainings were conducted for capacity building of registered farmers with total farmer strength of 107 including 10 female farmers. Revenue generation was 193466 Rs. As infrastructure development fodder store, kidding pen, mating pen etc. are under construction at nucleus farm.

Table 1: Reproductive performance in Marwari goats

Factor	Reproductive Performance (s)				
Overall Mean	Age at first service (d)	Age at first kidding (d)	Wt. at first service (kg)	Wt. at first kidding (kg)	First kidding interval (kg)
	371±1.21 (644)	528±2.17 (588)	23.8±0.06 (644)	28.8±0.09 (588)	332±0.56 (495)
2020-21	373^{c}±1.42 (121)	529^{c}±2.43 (112)	23.7^{a}±0.09 (121)	28.8^{b}±0.10 (112)	333^{c}±1.04 (98)
2021-22	366^{b}±1.83 (127)	523^{b}±2.21 (116)	23.8^{b}±0.07 (127)	28.9^{b}±0.14 (116)	329^{b}±1.75 (101)
2022-22	361^{a}±2.71 (148)	518^{a}±3.02 (133)	24.1^{d}±0.21 (148)	29.2^{c}±0.29 (133)	327^{a}±1.76 (109)
2023-24	375^{c}±1.66 (136)	531^{c}±2.53 (124)	23.9^{c}±0.15 (136)	28.8^{b}±0.13 (124)	334^{c}±1.32 (102)
2024-25	381^{d}±2.55 (112)	538^{d}±3.12 (103)	23.8^{b}±0.12 (112)	28.6^{a}±0.30 (103)	338^{d}±2.16 (85)
**P<0.01, *P<0.05					

**Value in parenthesis are number of observations*

Table 2: Least square means of body weight (kg) in Marwari goats at different ages

Factor	Body weight at different ages (kg)				
Overall Mean	Birth	3 Month	6 Month	9 Month	12 Month
	2.68±0.003 (7752)	8.57±0.008 (6476)	14.71±0.020 (3791)	18.70±0.039 (1990)	24.04±0.065 (1328)
Year of birth	**	**	**	**	**
2020-21	2.63^{a}±0.005 (1657)	8.41^{a}±0.015 (1376)	14.24^{a}±0.041 (471)	18.14^{a}±0.078 (148)	23.73^{a}±0.176 (40)
2021-22	2.66^{b}±0.005 (1686)	8.43^{a}±0.016 (1188)	14.47^{b}±0.031 (776)	18.45^{a}±0.062 (236)	23.88^{a}±0.127 (78)
2022-23	2.69^{b}±0.005 (1817)	8.65^{b}±0.013 (1765)	15.07^{c}±0.024 (1370)	19.17^{b}±0.033 (1008)	24.90^{b}±0.046 (922)
2023-24	2.72^{c}±0.005 (1851)	8.82^{c}±0.014 (1670)	15.14^{c}±0.028 (1023)	19.07^{b}±0.045^{b} (553)	23.64^{a}±0.086 (288)
2024-25	2.70^{bc}±0.008 (741)	8.62^{b}±0.015 (477)	14.62^{b}±0.071 (151)	18.66^{a}±0.139 (45)	-

**Value in parenthesis are number of observations*

Table 3: Lactation performance of Marwari goats over the years

Year	60d milk yield (L)	90d milk yield (L)	Total milk yield (L)	Lactation length (d)
Overall mean	62.79±0.111 (6966)	85.89±0.158 (6537)	93.36±0.189 (6014)	108.31±0.102 (6014)
2020-21	62.97^{b}±0.208 (1514)	85.11^{b} ±0.295 (1417)	92.31^{b}±0.342 (1318)	106.75^{a}±0.185 (1318)
2021-22	61.83^{a} ±0.211 (1463)	85.76 ^{b}±0.307 (1286)	93.30 ^{bc}±0.358 (1171)	108.22^{b}±0.193 (1171)
2022-23	64.11^{c} ±0.198 (1705)	88.88^{d}±0.273 (1678)	96.09 ^{d}±0.310 (1636)	108.86^{b}±0.168 (1636)
2023-24	63.42^{b}±0.201 (1636)	87.14^{c}±0.279 (1576)	94.93^{c} ±0.333 (1393)	108.08 ^{b}±0.180 (1393)
2024-25	61.63^{a} ±0.325 (648)	82.56^{a}±0.462 (594)	90.15^{a}±0.564 (496)	108.65 ^{b}±0.305 (496)

**Value in parenthesis are number of observations*

Table 4: Mortality rate in different age groups over the years

S.No.	Year	0-3M	3-6M	6-12M	Adult	Overall %
1.	2020-21	14.12	2.14	0.69	2.60	4.56
2.	2021-22	13.95	3.24	0.32	1.29	4.64
3.	2022-23	12.31	2.36	1.25	1.33	3.98
4.	2023-24	13.92	2.29	1.99	1.92	4.08
5.	2024-25	13.95	2.56	1.95	1.90	3.56

15. Osmanabadi Goat Field Unit, Nimkar Agricultural Research Institute (NARI) Phaltan, Maharashtra

PI: Dr. Chanda Nimbkar, Director, Nimbkar Agricultural Research Institute (AGB)



The Osmanabadi goat field unit was established in April 2009 at NARI, Phaltan, Maharashtra under the AICRP on Goat Improvement. The unit functions across 5 drought-prone districts namely Ahmednagar, Beed, Pune, Satara, and Solapur with one cluster in each district. Performance recording was carried out on 3,424 goats belonging to 123 goat keepers. Average mean for average age at first service (AFS), age at first kidding (AFK), weight at first service (WFS), weight at first kidding (AFK) and first kidding interval (FKI) were 270±5.0days, 402±5.0days, 19.8±0.08kg, 25.10±1.2kg, and 229.9±12.2days, respectively. The average litter size per kidding and per doe per year were 1.62 and 1.81, respectively, with 56.9% multiple births. The least squares mean of body weights at birth, 3, 6, 9, and 12 months were 2.80±0.03, 11.8±0.1, 16.1±0.2, 18.8±0.3, and 22.5±1.2kg, respectively. The lactation performance at 60, 90 days and total milk yield was 73.2±3.6. 108.2±4.6 and 160±7.0 litre, respectively. The heritability estimate for 90-day milk yield was 0.10±0.16. The unit also maintained dispersed nucleus flocks across four locations and multiplier flocks in eight locations. The total closing balance of goats across clusters was 1,259 (303 males and 956 females). Mortality rates were exceptionally low at 0.4%. During 2024–25, 14 Osmanabadi bucks were distributed. Additionally, 2,740 semen straws were provided for AI. Health and management initiatives included vaccination of 1,385 goats (HS) and 633 goats (ET), deworming across four clusters, and disinfection using sodium hypochlorite. Income per doe/year was estimated at Rs. 10,500. Capacity building included 24 training programs benefiting 248 farmers, including 50 women. Four research publications and multiple success stories were documented, highlighting innovation and community-based breeding approaches.

Table 1: Reproductive performance in Osmanabadi goats

Factor	Reproductive Performance (s)				
Overall Mean	Age at first Service (d)	Age at first kidding (d)	Wt. at first Service (kg)	Wt. at first kidding (kg)	First Kidding Interval (d)
	279.2±4.0 (212)	420.3±4.8 (192)	19.1±1.4 (200)	25.4±1.6 (197)	276.7±2.3 (1310)
Year of birth	**	**	**	**	**
2020	278 ± 4 (33)	428 ± 5.4 (30)	18.5 ± 1.8 (34)	24.5 ± 1.7 (30)	292.7 ± 5.4 (342)
2021	268 ± 5 (34)	418 ± 5.3 (32)	18.9 ± 1.3 (34)	26.1 ± 1.8 (30)	300.8 ± 5.6 (331)
2022	300 ± 4 (32)	450 ± 5.7 (32)	19.2 ± 0.9 (32)	25.7 ± 1.5 (52)	307.6 ± 5.6 (305)
2023	280 ± 5 (58)	402 ± 5.0 (48)	19.3 ± 0.8 (50)	25.5 ± 1.7 (35)	292.0 ± 5.8 (281)
2024	270 ± 5 (55)	402 ± 5.0 (50)	19.8 ± 0.8 (50)	25.1 ± 1.2 (50)	229.9 ± 12.2 (51)
***P<0.01, *P<0.05*					

*Value in parenthesis are number of observations

Table 2: Least square means of body weight (kg) in Osmanabadi goats at different ages

Factor	Body weight at different ages (kg)				
Overall Mean	Birth	3 Month	6 Month	9 Month	12 Month
	2.68 ± 0.02 (1388)	11.6 ± 0.1 (1587)	15.8 ± 0.1 (1050)	18.5 ± 0.1 (1441)	20.5 ± 0.3 (672)
Year of birth	**	**	**	**	**
2020-21	2.60 ± 0.04 (292)	11.5 ± 0.2 (157)	15.4 ± 0.4 (200)	17.2 ± 0.2 (129)	19.5 ± 1.8 (9)
2021-22	2.60 ± 0.05 (123)	11.5 ± 0.4 (146)	15.5 ± 0.4 (258)	17.8 ± 0.2 (220)	19.8 ± 0.9 (132)
2022-23	2.70 ± 0.03 (368)	11.6 ± 0.2 (454)	16.1 ± 0.2 (155)	18.3 ± 0.2 (232)	20.1 ± 1.4 (191)
2023-24	2.70 ± 0.03 (385)	11.7 ± 0.2 (490)	15.6 ± 0.2 (273)	19.7 ± 0.1 (768)	22.9 ± 0.6 (340)
2024-25	2.80 ± 0.03 (220)	11.8 ± 0.1 (340)	16.1 ± 0.2 (164)	18.8 ± 0.3 (92)	22.5 ± 1.2 (90)

*Value in parenthesis are number of observations

Table 3: Lactation performance of Osmanabadi goats over the years

Factor	Milk Yield of different Lactation traits		
Overall Mean	60d milk yield (L)	90d milk yield (L)	Lactation Length (d)
	71.2 ± 2.5 (254)	106.2 ± 3.0 (242)	131.2± 5.0 (242)
Year of Kidding	**	**	**
2020	73.3 ± 2.3 (29)	103.3±3.2 (58)	119±3.0 (37)
2021	72.1 ± 4.1 (19)	103.9±5.1 (12)	116±5.0 (10)
2022	72.2 ± 2.3 (91)	107.2±3.1 (64)	121± 4.0 (36)
2023	74.6 ± 4.4 (68)	109.9±5.7 (62)	140±8.0 (40)
2024	73.2 ± 3.6 (47)	108.2±4.6 (46)	160±7.0 (46)

*Value in parenthesis are number of observations

Table 4: Mortality rate in different age groups over the years

Year	Male						Female						Total Overall
	0-3M	3-6M	6-9M	9-12M	Adult	Overall	0-3M	3-6M	6-9M	9-12M	Adult	Overall	
20-21	0.76	0.57	0.28	0.09	0.09	1.8	0.57	0.48	0.09	0.09	0	1.2	1.5
21-22	1.5	0.95	0.43	0.26	0	3.1	1.1	0.78	0.34	0.17	0.08	1.5	2.8
22-23	0.77	0.34	0.08	0	0	1.2	0.60	0.69	0.08	0.08	0	0.4	1.4
23-24	0.58	0.25	0.08	0	0	0.9	0.25	0.16	0	0	0	0.4	0.7
24-25	0.47	0	0	0	0	0.5	0.51	0.68	0.17	0	0	1.4	0.9

16. Pantja Field Unit, G B P UA&T, Pantnagar, U. S. Nagar (Uttarakhand)

PI: Dr. R.K. Sharma, Professor & Head (LPM)



The Pantja goat unit came into existence in the year 2014 at GBPUA&T, Pantnagar, Uttarakhand. Presently, the operational in 4 clusters namely Bhimtal, Tilpuri, Bara, and Majhera spread across Nainital and Udham Singh Nagar districts. The unit has adopted 250 households across 85 villages. The goat population under the project showed a significant increase with an opening and closing balance of 3,527 and 3,973 goats, respectively. The survey revealed a rise in Pantja goat share from 24% in 2014–15 to 31.5% in 2024–25 in the project area. The least squares mean for age at first service (AFS), age at first kidding (AFK), weight at first service (WFS), weight at first kidding (AFK) and first kidding interval (FKI), were 269.89±0.12days, 418.84±1.61days, 22.41±0.8kg, 26.54±0.09kg, 244.97±4.57days, respectively. Average body weights (kg) at birth, 3, 6, 9, and 12 months were 2.29±0.01, 11.32±0.05, 16.40±0.07, 20.40±0.07, and 24.86±0.09 kg, respectively. The average 12-month weight improved from 20.0 kg in 2016–17 to 24.86 kg in 2024–25. The least squares mean for 90 days milk yield, 150 days milk yield, total milk yield and lactation length of goat kidded in 2024-25 were 49.81±0.28, 69.42±0.34, 61.34±0.68litres, and 123.08±1.80days, respectively. During the period, 1,744 kids produced using 81 Pantja bucks and 1,543 does. Kidding rate (litter size) was 1.58 with 50.32% twins and 3.36% triplets. Pantja goats demonstrated high prolificacy with 54.13% multiple births, breeding efficiency of 96.71%, and kidding efficiency of 143.50%. The overall flock mortality was 5.95%. Twenty-two bucks were distributed this year. A total of 118 functional bucks covered 1,543 does (including 312 non-descript). Seven training programs were conducted in 2024–25, benefiting 348 farmers (total 3,445), and the Centre continues collaboration with two NGOs and four SHGs. Eight multiplier flocks (ranging from 51 to 205 goats) were established. The centre documented 08 success stories, developed 05 technologies, and published 03 research papers, 01 leaflet, and 01 training manual in the year.

Table 1: Reproductive performance in Pantja goats

Factor	Reproductive Performance (s)				
Overall Mean	Age at first Service (d)	Age at first kidding (d)	Wt. at first Service (kg)	Wt. at first kidding (kg)	First Kidding Interval (d)
Year	**	**	**	**	**
2020-21	272.76^{a}±2.02 (207)	423.18^{a}±1.99 (207)	21.44^{a}±0.13 (207)	25.11^{a}± 0.11 (207)	247.77^{a}±3.31 (121)
2021-22	270.69^{b}±1.69 (218)	420.91^{ab}±1.68 (218)	22.08^{ab}±0.07 (218)	26.09^{ac}±0.06 (218)	245.99^{ac}±4.31 (67)
2022-23	270.26^{b}±1.38 (151)	419.96^{ab}±1.32 (151)	22.21^{b}±0.11 (151)	26.28^{ac}±0.12 (151)	245.61^{ac}±3.15 (84)
2023-24	270.11^{b}±1.67 (304)	419.56^{ab}±1.56 (304)	22.32^{b}±0.07 (304)	26.32^{ac}±0.05 (304)	245.48^{ac}±4.82 (110)
2024-25	269.89^{b}±1.87 (311)	418.84^{b}±1.61 (311)	22.41^{b}±0.12 (311)	26.54^{bc}±0.09 (311)	244.97^{bc}±4.57 (173)
***P<0.01, *P<0.05*					

*Value in parenthesis are number of observations

Table 2: Least square means of body weight (kg) in Pantja goats at different ages

Factor	Body weight at different ages (kg)				
Overall Mean	Birth	3 Month	6 Month	9 Month	12 Month
	2.25±0.01 (7693)	11.14±0.02 (6940)	16.05±0.03 (6151)	20.02±0.03 (5426)	24.33±0.06 (4632)
Year of birth	**	**	**	**	**
2020-21	2.17±0.01 (1378)	10.82±0.05 (1342)	15.45^{a}±0.06 (1186)	19.32^{a}±0.08 (1005)	23.55^{a}±0.24 (942)
2021-22	2.24±0.02 (1642)	11.12±0.05 (1509)	16.04^{ac}±0.06 (1114)	19.98^{ac}±0.07 (993)	24.29^{ac}±0.09 (788)
2022-23	2.26±0.01 (1497)	11.21±0.04 (1331)	16.12^{ac}±0.05 (1312)	20.13^{ac}±0.06 (1138)	24.42^{ac}±0.07 (955)
2023-24	2.27±0.01 (1573)	11.23±0.04 (1309)	16.17^{ac}±0.04 (1193)	20.16^{ac}±0.05 (1063)	24.51^{ac}±0.07 (920)
2024-25	2.29±0.01 (1603)	11.32±0.05 (1449)	16.40^{bc}±0.07 (1346)	20.40^{bc}±0.07 (1227)	24.86^{bc}±0.09 (1027)

*Value in parenthesis are number of observations

Table 3: Lactation performance of Pantja goats over the years

Factor	Milk Yield of different Lactation traits			
Overall Mean	90d milk yield (L)	150d milk yield (L)	Total milk yield (L)	Lactation length (d)
	49.14±0.11 (861)	68.92±0.18 (362)	60.07±0.33 (861)	121.71±0.90 (861)
Year of kidding	**	**	**	**
2020-21	47.87^{a}±0.22 (135)	67.66^{a}±0.64 (42)	58.85^{a}± 0.84 (135)	120.44^{ab}±5.62 (135)
2021-22	48.68^{ab}±0.21 (174)	68.38^{ab}±0.38 (64)	59.48^{ab}±0.68 (174)	121.38^{bd}±1.89 (174)
2022-23	49.34^{bc}±0.22 (147)	68.98^{ab}±0.37 (78)	60.27^{bc}±0.82 (147)	122.25^{cdf}±2.44 (147)
2023-24	49.52^{bc}±0.16 (181)	69.13^{bc}±0.42 (75)	60.31^{bc}±0.70 (181)	122.32^{cdf}±1.93 (181)
2024-25	49.81^{bc}±0.28 (224)	69.42^{bc}±0.34 (103)	61.34^{bc}±0.68 (224)	123.08^{ef}±1.80 (224)

*Value in parenthesis are number of observations

Table 4: Mortality rate in different age groups over the years

Years	0-3 M	3-6M	6-12M	Adult	Overall	Male	Female
2020-21	10.01	6.75	5.98	4.59	7.4	3.18	4.21
2021-22	9.22	4.82	4.15	3.95	6.36	2.81	3.54
2022-23	9.21	4.76	4.76	3.87	6.24	2.74	3.5
2023-24	9.04	4.7	4.47	3.62	6.1	2.64	3.46
2024-25	8.98	4.31	4.29	3.42	5.95	2.56	3.39

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

PI: Dr. Vishnu Narwade, Professor (AGB)



The All India Coordinated Research Project on Sangamneri Goat was initiated in 2002. Initially, 500 does were registered, and the program has since expanded to 5,097 breedable does, covering six clusters across three districts—Ahmednagar, Nasik, and Pune. In 2020-21, Nandurbar was added as a new cluster under the TSP, registering 1,342 goats from 351 farmers from 2022. 1,162 goat keepers and 4,572 goats were registered, and in 2023-24, the program transitioned to SCSP. During the year, 51 breeding bucks were rotated across the field, resulting in 2,751 births. The least squares mean for age at first service (AFS), age at first kidding (AFK), weight at first service (WFS), weight at first kidding (AFK) and first kidding interval (FKI) were 246.20±12.20days, 395.10±12.50days, 22.30±1.40kg, 26.30±1.40kg, 274.50±12.70days, respectively. The least square means of body weights (farm flock) at birth, 3, 6, 9, and 12 months were 2.30kg, 9.31kg, 12.41kg, 14.25kg, and 18.11kg, respectively. The least square means of body weights (field) at birth, 3, 6, 9, and 12 months were 2.52±0.01, 11.15±0.01, 15.89±0.05, 19.78±0.11, and 25.31±0.16kg, respectively. Body weight improvements over baseline data were 10.04% at birth, 29.65% at 3 months, 25.61% at 6 months, 17.80% at 9 months, and 28.41% at 12 months. The litter size was 1.78. Factors like village cluster, year, and season of birth significantly affected pre-partum traits. The 90-day milk yield for 2024-25 was 120.45±2.15litre, influenced by similar non-genetic factors. The overall mortality was 1.27%. The program had organized 19 group meetings, 2 health camps, 4 SCSP trainings, and 9 general trainings in 2024 benefitted 452 farmers. Additionally, 11 male and 25 females were introduced to the nucleus flock from field to improve genetic potential and to minimize inbreeding.

Table 1: Reproductive performance in Sangamneri goats

Factor	Reproductive Performance (s)				
Overall Mean	Age at first service (d)	Age at first kidding (d)	Wt. at first service (kg)	Wt. at first kidding (kg)	first kidding interval (kg)
	250.10±11.10 (577)	399.20±12.30 (242)	19.50±1.30 (577)	23.50±1.35 (242)	275.80±12.6 (526)
2020-21	250.10±11.10 (577)	399.20±12.30 (242)	19.50±1.30 (577)	23.50±1.35 (242)	275.80±12.6 (526)
2021-22	245.10±12.10 (544)	394.20±12.30 (256)	19.80±1.35 (544)	23.90±1.40 (256)	274.50±12.60 (524)
2022-22	246.25±1.40 (576)	390.31±1.70 (261)	20.40±1.30 (576)	24.30±1.30 (261)	276.81±12.5 (564)
2023-24	255.20±12.10 (591)	392.03±12.6 (260)	21.30±1.30 (591)	25.20±1.30 (260)	275.81±12.60 (572)
2024-25	246.20±12.20 (586)	395.10±12.50 (253)	22.30±1.40 (586)	26.30±1.40 (253)	274.50±12.70 (546)
***P<0.01, *P<0.05*					

*Value in parenthesis are number of observations

Table 2: Least square means of body weight (kg) in Sangamneri goats at different ages

Factor	Body weight at different ages (kg)				
Overall Mean	Birth	3 Month	6 Month	9 Month	12 Month
	2.48 ± 0.01 (13159)	11.07 ± 0.02 (11701)	15.71 ± 0.05 (6306)	19.65 ± 0.08 (1808)	24.73 ± 0.16 (860)
Year of birth	**	**	**	**	**
2020-21	2.49 ± 0.01 (2487)	11.13 ± 0.03 (2019)	15.51 ± 0.05 (1283)	19.48 ± 0.08 (352)	23.51 ± 0.15 (183)
2021-22	2.47 ± 0.02 (2546)	11.11 ± 0.03 (2316)	15.73 ± 0.05 (1355)	19.92 ± 0.07 (413)	24.83 ± 0.17 (189)
2022-23	2.43 ± 0.01 (2682)	10.82 ± 0.02 (2332)	15.62 ± 0.04 (1308)	19.48 ± 0.06 (409)	24.79 ± 0.15 (201)
2023-24	2.47 ± 0.01 (2693)	11.12 ± 0.01 (2505)	15.82 ± 0.05 (1176)	19.59 ± 0.10 (320)	25.19 ± 0.15 (146)
2024-25	2.52 ± 0.01 (2751)	11.15 ± 0.01 (2529)	15.89 ± 0.05 (1184)	19.78 ± 0.11 (314)	25.31 ± 0.16 (141)

*Value in parenthesis are number of observations

Table 3: Lactation performance of Sangamneri goats over the years

Factor	Milk Yield of different Lactation traits
Overall Mean	90 d milk yield (L)
	120.89 ± 2.22 (2381)
Year of Kidding	
2020	121.98±2.03 (578)
2021	121.91±2.38 (579)
2022	119.87±2.46 (371)
2023	120.24±2.08 (438)
2024	120.45±2.15 (415)

*Value in parenthesis are number of observations

Table 4: Mortality rate in different age groups over the years

S. No.	Particulars	0-3 M	3-6 M	6-12 M	Adult	Overall
1.	No. of Animals available	4191	4264	2676	8819	19950
2.	No. of animals died	156	35	28	35	254
3.	Mortality (%)	3.72	0.82	1.04	0.39	1.27

18. Sirohi Goat Field Unit, LRS, Vallabhnagar, Distt. Udaipur, RAJUVAS, Rajasthan

PI: Dr. R.K. Nagda, Professor (AGB)



The Sirohi goat field unit under the AICRP on Goat Improvement was established on 1st January 2001 with the primary objective of genetic improvement in the farmers' flocks. Presently, the unit operates across five field clusters, covering Madaria, Karget, Tank, Sakria Khedi, Gariawas, Puriakhedi (05) villages and benefiting a large number of farm households. The data on growth, lactation and reproductive performance of Sirohi goats under field conditions have been analyzed using least square techniques. The closing balance of the registered flock was 2580 animals including 1542 adult females. During report period, 1082 kids were born, out of which 534 were males. 269 animals were maintained at nucleus flock. Total 475 males were sold out of which maximum 190 males were sold from adult age group. Reproductive performance of test progenies showed an average age at first service (AFS), age at first kidding (AFK), weight at first service (WFS), weight at first kidding (WFK) and First kidding interval (FKI) were 484.63±28.80days, 634.90 ± 28.85days, 23.29 ± 0.61kg, 27.11 ± 0.44kg and 365.33 ± 7.19days, respectively. The average body weights (kg) at birth, 3, 6, 9, and 12 months were 2.45 ± 0.03, 12.48 ± 0.14, 16.13 ± 0.25, 21.14 ± 0.49 and 24.78 ± 0.25kg, respectively. Growth performance was significantly influenced by cluster, sex of kid, and year of birth, with male kids being consistently heavier than female kids at all ages. The least square means for 90 days milk yield, 150 days milk, total lactation yield and lactation length of goats kidded in 2024-25 were 72.99 ± 2.28litre, 102.92 ± 5.08litre, 103.40 ± 5.05litre and 151.51 ± 1.13days, respectively. Significant effects of cluster, type of kidding, period, and lactation order were observed on milk production traits. The average litter size (kidding rate) was 1.18. Health and management interventions during the year included deworming of 6,338 animals and ectoparasite treatment in 8,036 goats. Vaccination efforts covered 2,117 animals against Enterotoxaemia (ET) and 1,466 against PPR. The overall flock mortality was 4.95%.

Table 1: Reproductive performance in Sirohi goat field unit

Factor	Reproductive Performance (s)				
Overall Mean	Age at first Service (d)	Age at first kidding (d)	Wt. at first Service (kg)	Wt. at first kidding (kg)	First Kidding Interval (d)
	487.90±23.67 (486)	637.74±23.72 (486)	24.49±0.51 (486)	27.93±0.36 (486)	358.26±3.79 (2148)
Year of birth	**	**	**	**	**
2020-21	414.89^{a}±25.09 (106)	564.25^{a}±25.13 (106)	23.62^{a}±0.54 (106)	27.71^{a}±0.38 (106)	363.33^{b}±7.16 (377)
2021-22	480.96^{b}±29.56 (90)	630.55^{a}±29.61 (90)	24.26^{a}±0.63 (90)	27.74^{ab}±0.45 (90)	356.78^{ab}±6.63 (435)
2022-23	524.32^{a}±29.47 (91)	674.30^{bc}±29.53 (91)	25.68^{b}±0.63 (91)	28.70^{c}±0.45 (91)	365.15^{b}±7.23 (435)
2023-24	534.54^{c}±28.75 (106)	684.72^{c}±28.79 (106)	25.57^{b}±0.62 (106)	28.38^{b}±0.43 (106)	340.71^{a}±6.94 (477)
2024-25	484.63^{b}±28.80 (93)	634.90^{b}±28.85 (93)	23.29^{a}±0.61 (93)	27.11^{a}±0.44 (93)	365.33^{b}±7.19 (447)
***P<0.01, *P<0.05*					

*Value in parenthesis are number of observations

Table 2: Least square means of body weight (kg) in Sirohi goat field unit at different ages

Factor	Body weight at different ages (kg)				
Overall Mean	Birth	3 Month	6 Month	9 Month	12 Month
	2.46±0.02 (5717)	11.58±0.10 (4977)	15.18±0.16 (3743)	19.39±0.27 (3026)	23.98±0.20 (2108)
Year of birth	**	**	**	**	**
2020-21	2.40^{a}±0.03 (965)	11.29^{a}±0.12 (848)	15.39^{c}±0.19 (750)	19.03^{c}±0.30 (623)	23.41^{a}±0.25 (465)
2021-22	2.40^{a}±0.03 (1193)	11.25^{a}±0.11 (1093)	14.70^{ab}±0.17 (996)	18.70^{b}±0.28 (818)	23.64^{a}±0.23 (604)
2022-23	2.72^{a} 0.03 (1187)	11.46^{b}±0.11 (1086)	14.67^{a}±0.17 (947)	18.37^{a}±0.28 (840)	24.10^{b}±0.23 (585)
2023-24	2.34^{a}±0.03 (1464)	11.44^{b}±0.11 (1295)	15.01^{b}±0.17 (922)	19.72^{d}±0.28 (711)	24.78^{c}±0.25 (454)
2024-25	2.45^{a}±0.03 (908)	12.48^{c}±0.14 (655)	16.13^{d}±0.25 (128)	21.14^{e}±0.49 (34)	–

*Value in parenthesis are number of observations

Table 3: Lactation performance of Sirohi goat field unit over the years

Factor	Milk Yield of different Lactation traits			
Overall Mean	90d milk yield (L)	150d milk yield (L)	Total milk yield (L)	Lactation length (d)
	59.75±2.14 (3712)	84.92±4.87 (2612)	85.64±4.84 (2612)	153.66±1.08 (2612)
Year of kidding	**	**	**	**
2020-21	56.33^{b}±2.24 (762)	84.53^{c}±5.01 (557)	85.25^{d}±4.97 (557)	154.21^{a}±1.11 (557)
2021-22	53.39^{c}±2.20 (901)	80.30^{b}±4.94 (722)	81.12^{cd}±4.91 (722)	154.87^{c}±1.09 (722)
2022-23	56.38^{a}±2.22 (547)	80.68^{a}±4.95 (547)	81.25^{a}±4.92 (547)	154.72^{d}±1.09 (547)
2023-24	59.64^{b}±2.20 (870)	76.18^{a}±4.99 (405)	77.19^{ab}±4.96 (405)	152.99^{bc}±1.11 (405)
2024-25	72.99^{c}±2.28 (632)	102.92^{b}±5.08 (381)	103.40^{bc}±5.05 (381)	151.51^{b}±1.13 (381)

*Value in parenthesis are number of observations

Table 4: Mortality rate over the years

Year	2020-21	2021-22	2022-23	2023-24	2024-25
Flock Strength	4100	4568	4067	4314	3455
Goats Died	191	168	161	144	171
Mortality (%)	4.65	3.68	3.95	3.37	4.95

19. Surti Field Unit, Livestock Research Station, Kamdhenu University, Navsari, Gujarat

PI: Dr Gaurav Pandya, Assistant professor (AGB)



AICRP on Surti goat improvement was began in 2001. The project was operational across four clusters namely Navsari, Bilimora, Vapi, and Dang (Vaghai) covering 24 villages and 85 farmers. A total of 228 males and 1066 females maintained by farmers were covered, in addition to a nucleus flock of 170 Surti goats maintained at the research station. Reproductive performance showed an average age at first service (AFS), age at first kidding (AFK), weight at first service (WFS), weight at first kidding (WFK) and first kidding interval (FKI) were 423.67±33.83days, 571.31±33.98days, 24.78±1.25kg, 27.45±0.61kg and 337.73±38.35days, respectively. The least squares mean of kids' body weights at birth, 3, 6, 9 and 12 months of age were 2.42±0.05, 9.37±0.37, 18.22±0.35, 22.90±0.53, and 25.31±0.66kg, respectively. Milk yield in the farmers' flock averaged 1.07±0.15 liters per day per doe, with cumulative 60-day and 90-day yields of 64.20±1.15 and 92.34±2.69 liters, and a lactation length of 93.23±3.64 days. In the nucleus flock, milk yield for 90day, 150day, and total milk yields and lactation length of goat kidded in 2024 were 128.28±4.16, 187.02±8.94, 243.06±12.99, and 206.06±8.97 days, respectively. The mortality rate was 10.95% in the field and 9.9% in the nucleus flock. Kidding rates were 1.49 in the field and 1.63 in the nucleus flock. A total of 10 training programs were conducted, including one three-day program attended by 296 goat keepers. Exposure visits and 6 health camps were organized, along with 4 Goshthi meetings and 25 awareness programs. To support genetic improvement, 46 breedable bucks and 34 females from the nucleus flock and three bucks from multiplier flocks were distributed to farmers. Research outputs included 11 published articles.

Table 1: Reproductive performance in Surti goats

Factor	Reproductive Performance (s)				
Overall Mean	Age at first Service (d)	Age at first kidding (d)	Wt. at first Service (kg)	Wt. at first kidding (kg)	First Kidding Interval (d)
	436.29 ± 51.36 (109)	595.13 ± 56.89 (96)	25.35 ± 1.29 (111)	27.80 ± 1.01 (126)	333.92 ± 37.26 (107)
Year of birth	**	**	**	**	**
2020-21	520.21 ± 45.95 (14)	669.79 ± 46.15 (14)	22.01 ± 0.76 (14)	25.34 ± 0.74 (14)	283.90 ± 13.20 (51)
2021-22	474.61 ± 82.18 (18)	612.94 ± 84.49 (18)	-	26.03 ± 1.22 (18)	413.82 ± 46.40 (18)
2022-23	442.87 ± 61.34 (25)	584.87 ± 79.45 (23)	25.64 ± 2.09 (25)	27.58 ± 1.39 (23)	385.63 ± 41.37 (18)
2023-24	415.76 ± 36.55 (25)	561.13 ± 33.75 (15)	26.56 ± 1.00 (45)	29.59 ± 1.07 (45)	349.55 ± 47.08 (9)
2024-25	423.67 ± 33.83 (27)	571.31 ± 33.98 (26)	24.78 ± 1.25 (27)	27.45 ± 0.61 (26)	337.73 ± 38.35 (11)
***P<0.01, *P<0.05*					

*Value in parenthesis are number of observations

Table 2: Least square means of body weight (kg) in Surti goats at different ages

Factor	Body weight at different ages (kg)				
Overall Mean	Birth	3 Month	6 Month	9 Month	12 Month
	2.60 ± 0.30 (243)	9.08 ± 0.33 (315)	13.98 ± 0.35 (332)	17.73 ± 0.61 (252)	21.79 ± 1.05 (249)
Year of birth	**	**	**	**	**
2020-21	--	5.76 ± 0.11 (85)	8.39 ± 0.15 (108)	11.28 ± 0.21 (85)	16.44 ± 2.33 (55)
2021-22	2.85 ± 0.31 (50)	10.63 ± 0.32 (47)	14.26 ± 0.42 (36)	19.88 ± 0.72 (29)	21.94 ± 0.56 (62)
2022-23	2.8 ± 0.38 (42)	10.73 ± 0.34 (39)	16.50 ± 0.42 (45)	20.39 ± 1.04 (37)	22.61 ± 0.87 (53)
2023-24	2.53 ± 0.42 (59)	11.32 ± 0.49 (53)	13.85 ± 0.40 (29)	19.84 ± 0.47 (44)	24.44 ± 0.80 (42)
2024-25	2.42 ± 0.05 (92)	9.37 ± 0.37 (91)	18.22 ± 0.35 (114)	22.90 ± 0.53 (57)	25.31 ± 0.66 (37)

*Value in parenthesis are number of observations

Table 3: Lactation performance of Surti goat field unit over the years

Factor	Milk Yield of different Lactation traits			
Overall Mean	90d milk yield (L)	150d milk yield (L)	Total milk yield (L)	Lactation length (d)
	104.01±5.75 (175)	171.52±14.38 (89)	176.68±17.45 (163)	161.61±12.87 (143)
Year of kidding	**	**	**	**
2020-21	87.97±4.15 (52)	139.28±10.13 (24)	127.15±11.20 (52)	119.15±8.13 (52)
2021-22	113.32±8.14 (19)	204.19±27.14 (9)	153.32±21.37 (21)	156.84±12.76 (19)
2022-23	115.84±7.26 (21)	189.78±20.69 (16)	154. 29±22.74 (23)	159.12±16.75 (23)
2023-24	88.42±4.30 (32)	159.38±7.79 (28)	187.34±20.00 (16)	217.19±17.05 (16)
2024-25	128.28±4.16 (51)	187.02±8.94 (29)	243.06±12.99 (51)	206.06±8.97 (33)

*Value in parenthesis are number of observations

Table 4: Mortality rate over the years

Year	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
Flock Strength	331	1291	793	565	336	1294
Goats Died	24	20	09	05	04	142
Mortality (%)	7.25	0.15	1.13	0.88	1.19	10.95

NON-FUNDING UNITs (INSTITUTIONAL SUPPORT)

1. Anjori Goat Unit, Dau Shri Vashudev Chandrakar Kamdhenu Vishwavidhyalaya, Durg

PI: Dr. R.C. Remteke, Associate Professor (Animal Nutrition)



AICRP on Anjori goats has been initiated at the Dau Shri Vashudev Chandrakar Kamdhenu Vishwavidhyalaya, Durg, from the year 2024–25. Anjori goat germplasm resource centres have been established in Chhattisgarh through the selection of 18 cluster villages across 6 districts, involving 48 farmers and a total goat population of 2,106. A baseline survey conducted in all project villages has generated comprehensive data on breed traits, flock size, production, and farmer income. Key performance indicators include: average birth weight of 3.1 kg, body weights of 11.68, 14.45, 16.18, and 24.72 kg at 3, 6, 9, and 12 months respectively, an average milk yield of 32.29 litres, a kidding rate above 90%, kid mortality of 10%, and adult mortality ranging between 5–10%. Farmers generally maintain flocks of 10–15 goats, earning an average annual income of about ₹40,000. Four training sessions held between August 2024 and March 2025 under NRLM/paid initiatives. Focused on "Goat Farming and Entrepreneurship Development," these trainings benefitted 196 participants, including farmers, entrepreneurs, Pashu Sakhi workers, and women SHGs. Infrastructure development is in progress with the creation of an Anjori nucleus herd at DRS Farm, Anjora. The herd currently houses 143 Anjori goats, forming the foundation for systematic breed improvement and multiplication. Based breeding programmes, along with the active involvement of SHGs. These efforts are expected to ensure the sustainable development and genetic improvement of the Anjori goat breed, while contributing to rural income generation, women's empowerment, and entrepreneurship in goat farming.

2. Bidri Goat Unit, Karnataka Veterinary, Animal and Fisheries University, Bidar, Karnataka

PI: Dr. N. Anand Kumar, Assistant Professor (AGB)



The All India Coordinated Research Project (AICRP) on Bidri goats has been initiated at the Veterinary College, Bidar from year 2024–25. A comprehensive baseline survey was conducted in three talukas of Bidar district—namely, Bidar, Bhalki, and Basava Kalyan. The findings revealed that the majority of goat keepers in these villages possess small to medium land holdings. Most of them are either illiterate or have attained only a basic level of education. Based on the goat population density and the willingness of local farmers to participate, two villages—Bhagdal Tanda in Bidar taluk and Kerur in Bhalki taluk—were identified and selected as primary clusters for the implementation of the project. In Bhagdal Tanda, 80 farmers owning a minimum of four breedable does were selected, and their animals were tagged and registered. In Kerur village, 30 farmers with at least eight breedable does each were enrolled. Efforts are currently underway to establish a third cluster in Basava Kalyan taluk. To strengthen the nucleus flock at the Livestock Farm Complex of Veterinary College Bidar, 40 adult does and 4 bucks were procured from breeding tracts. Additionally, one-day training and feed distribution programmes have been successfully conducted at the cluster locations to enhance farmer awareness and participation.

3. Black Bengal Unit, ICAR-NDRI-ERS, Kalyani, Nadia (W.B)
PI: Dr. Ajoy Mandal, Principal Scientist (AGB)



The All India Coordinated Research Project (AICRP) on Black Bengal goats has been initiated at the ICAR-NDRI, Kalyani, West Bengal from year 2024–25. A total of 09 villages (03 villages each in 3 districts of West Bengal) were selected under the AICRP on Black Bengal Unit. A total of 655 farmers from 9 villages of 3 districts, 149 farmers from Nadia district, 186 farmers from Birbhum district and 320 farmers from North 24PGS district. Most of the farmers in all villages are low to marginal type, having small to medium land holdings and either illiterate or having low educational level and follow the traditional goat farming practices. Most of the farmers possess goats having flock size of 4 to 8 goats in each household. A total of 230, 396 and 616 breedable females were tagged in the selected villages of Nadia, Birbhum and North 24 PGS districts of West Bengal. So far, 25 breedable tagged bucks from Nucleus herd of NDRI, Kalyani were distributed in the selected project areas. Besides, 7 health village bucks were also selected and tagged and used for breeding purpose. The flock strength in the nucleus flock, situated at NDRI, Kalyani was 196 where females and male animals were 147 and 49, respectively. The average body weights of kids at birth, 3, 6, 9 and 12 months of age were 1.05±0.01, 3.13±0.05, 6.16±0.13, 9.12±0.46 and 11.28±0.40 kg, respectively. The twining and triplet rate for this breed in the flock is 56 and 12%, respectively. On the other hand, average body weights of kids at birth and 3- months of age ranged from 1.20 to 1.50 kg and 4.21 to 7.09 kg, respectively in the farmers' flocks of selected districts of West Bengal. A total of 16 awareness camp in different villages of these 3 districts were conducted. So far, 85, 165 and 100 adult females were distributed in the adopted villages of Nadia, Birbhum and North 24 PGS districts of West Bengal. During the period of report, 8 animal health camps, 4nos. vaccination camp and 5 nos. of training programs were also organized in different villages of study area. Other inputs like veterinary medicine kits, mineral mixture, vitamins, goat feed and kid milk replacer were also distributed among farmers.

4. Black Bengal Unit, ICAR-IVRI, ERS, Kolkata
PI: Dr. Shyamal Naskar, Principal Scientist (LPM)



The project was implemented at the ICAR-Indian Veterinary Research Institute, Eastern Regional Campus located at Kalyani, Nadia, West Bengal. The initial stock as on 01.04.2024 was a total of 53 that consisted of 31 adult does, 10 bucks, 7 female kids and 5 male kids. As on 01.04.2025, the nucleus flock comprises 214 animals, which include 130 adult does, 32 bucks, 23 female kids and 29 male kids after incorporation of new animals from different districts. A total 50 superior genetic stock of Black Bengal goats have been distributed from the nucleus herd to farmers of the selected clusters under Institute flagship programme. Three cluster of Black Bengal Unit are operational in three different districts. A total of 500 breedable does were selected in each cluster and covered under the program. Herd sizes in the breeding tract ranges from 2-5 goats to 30-40 goats, with an average herd size of 5.2 animals. In the nucleus flock the average birth weight was 1.09 ± 0.01 kg (n=58) observations. The average body weights at 3 and 6 were 2.96 ± 0.15 kg, 5.78 ± 0.28 kg, respectively. In comparison, goats in the farmers' flocks (n =50) recorded with average birth weight 0.850 ± 0.20 kg, while the average body weights at 3 and 6 months were 2.50 ± 0.20 kg and 5.55 ± 0.45 kg, respectively. The age at first puberty (days) and age at first kidding (days) was 181.56 ± 21.25 days (n=35) and 395.85 ± 35.15 days (n=34) respectively. The average litter size of nucleus herd was 1.84 with single, twin and triplet percentage was 31.51, 53.42 and 15.07, respectively. As part of the All-India Co-ordinated Research Project on Black Bengal Goat, a series of 3 capacity-building programs, vaccination program, Black Bengal Promotional program and input

distribution programs under DAPSC were conducted to empower farmers at Bongaon, Canning-I, and Polba blocks.

5. Black Bengal Goat Unit, Birsa Agricultural University, Kanke, Ranchi (Jharkhand)

PI: Dr. Nandini Kumari, Assistant Professor (AGB)



The Black Bengal goat improvement program under the AICRP on Goat Improvement is operational across four centres: Chamguru (Ranchi), Palajori (Deoghar), Barabanki (Jamshedpur), and Tiko (Lohardaga). The opening balance was 4401 and closing balance was 5936. . The centre-wise flock strength was Chamguru (1,697), Palajori (1,572), Barabanki (1,478), and Tiko (1,243). The body weight at birth, 3, 6, 9, and 12 months of age was 1.24±0.03 kg, 5.67±0.03 kg, 8.46±0.04 kg, 11.43±0.08 kg, and 14.17±0.11 kg, respectively. The kidding rate was 1.59, and 527 kids were castrated during the year. Mortality was reduced to 3.02% in farmer flocks through regular health interventions, including vaccination, deworming, dipping, and supplementary feeding. Selection differential in males at 12 months was 1.42 kg. Capacity building included two three-day training batches (25 ST male and 25 ST female farmers) and advisories to 246 farmers through health camps and Kishan Gosthis. A total of 5 bucks were distributed, 1,896 goats were vaccinated, and 581 goats underwent dipping. Over the last five years, 306 males and 110 females sold/ distributed. The project has contributed to genetic improvement, with heritability estimates (h^2) for body weights ranging from 0.77 to 0.90 across age groups, highest at 6 months (0.8993). The seven Publications and three awards were achieved during the year. The program covered 472 farmers and demonstrated sustainable genetic progress, improved management practices, and enhanced livelihood support through training, health care, and selective breeding initiatives in the Black Bengal goat population of Ranchi and adjoining districts. Three success stories were documented during the year.

6. Jakhrana Goat Unit, Lala Lajpat Rai University of Veterinary & Animal Sciences, Hisar

PI: Dr. Yogesh Bangar, Assistant Professor (AGB)



The All India Coordinated Research Project (AICRP) on Jakhrana goats has been initiated at the LUVASU, Hisar from the year 2024–25. Nine goat farmers and their 150 Jakhrana goats were collected from three villages (Chelawas, Bhagdana, Gudha Kemla) of Mahendragarh district. Most farmers were marginal landholders rearing 25-30 goats. Similarly, the project team surveyed field region contacted their 130 goats from two villages (Chelawas and Majra Khurd). The project team also carried out survey of additional two goat farmers from Narnaul tehsil. Thus, total of 18 farmers across 5 villages of Mahendragarh district were engaged during the reporting period. Total of 330 goats were covered under the program. Average body weight at six and twelve months in surveyed animals was 18 and 24 kg, respectively. The average milk production (90days) among covered does was 136 kg. On second stage, the new cluster from Bhiwani district was identified through survey. Also, the Jakhrana goat farmers are being identified from another cluster of Hisar district. The data collection of these two clusters is expected to be completed by July 2025. One day "Kisan Goshti" on modern goat farming for Scheduled caste goat farmers was organized on 13th June 2025 at LUVAS, Hisar. In this event, total 70 farmers

participated. The participants were provided with 100 kg goat feed which was provided by Project co-ordinator (NFU), ICAR-CIRG, Makhdoom.

7. Jakhrana Goat Unit, ICAR-CIRG, Makhdoom

PI: Dr. Gopal Dass, Principal Scientist (AGB)



The unit is operational at ICAR-CIRG, Makhdoom, Farah, Mathura (UP). The unit has two components viz. farm unit and field unit. At farm, the Jakhrana goats are being maintained since year 2005. Breeding bucks are selected based on 9-month body weight and 90 days milk yield of their dams in first parity. Flocks are maintained under semi-intensive feeding management and restricted breeding in practice. Under field component, two clusters viz. Jakhrana and Naghaudi consisting each of four villages have been formed. In nucleus flock at farm, the opening balance of Jakhrana goats on the first day of the year was 244 which comprised of 70 males and 174 females and closing balance of 274 goats had a stock of 77 males and 144 females. The overall mortality was 9.04%. During this year, a total of 102 kids were born from 68 kidding. Out of 102, 47 (46.08%) were males and 55.0 (53.92%) were females. Out of total, 50 (65.8%) kids born as single and 26 (34.2%) born as multiples. The kidding rate was recorded as 1.34. The replacement rate of the does was 29.0%. The annual tupping, kidding on available and bred basis were recorded as 90.0, 83.5 and 93.8%, respectively. The overall least-squares means of body weights of kids at birth, 3-, 6-, 9- and 12-month age were 2.77.04±0.04, 10.19±0.11, 15.04±0.37, 21.45±0.47 and 25.30±0.54kg, respectively. The overall least-squares means of 90, 140 days, total milk yield and lactation length were 133.79±3.03, 168.75±6.93, 178.75±8.78 litre and 170.49±5.73days, respectively. Doe Number 1668 has declared as *champion goat* with a record yield of 190 litre milk in 90 days. The h^2 estimates of birth, 3-, 6-, 9- and 12-month body weights were 0.202±0.100, 0.441±0.126, 0.175±0.097, 0.283. ±0.109 and 0.061±0.082, respectively. The selection differential for 9-month body weight and 90 days milk yield of their dams were respectively 2.3 kg and 23.0 litre. During year 2024, a total of 14 superior germ plasm (11 males and 03 females) were supplied to various developmental agencies, Research organizations, non-government organizations and progressive farmers for genetic improvement of their flocks under field conditions. During reporting year, a total of 08 (02 bucks and 06 does) Jakhrana goats were selected from the breeding tract, procured and added in the institute flock to create genetic variability in the flocks for economic traits.

8. Rohilkhandi Goat Unit, ICAR-IVRI, Izatnagar

PI: Dr. Hari Om Pandey, Sr. Scientist (AGB)



The AICRP on Rohilkhandi goats has been initiated at ICAR-IVRI, Izatnagar from the year 2024–25. A nucleus flock of approximately 150 Rohilkhandi goats was maintained at the Livestock Production and Management Section of ICAR–IVRI, Izatnagar to evaluate the performance of the breed and generate benchmark data for future improvement programs. At the institute farm, the average birth weight of kids was 2.12 ± 0.13 kg (N=5). Their mean body weights at 3, 6, and 12 months of age were 8.71 ± 0.62 kg (N=50), 12.69 ± 0.4 kg (N=50), and 23.64 ± 0.8 kg (N=50), respectively. To avoid inbreeding and broaden the genetic base of the nucleus flock, 30 additional Rohilkhandi goats were procured and introduced into the herd. To assess performance under field conditions, cluster-based interventions were launched in two major areas—Alampur Jaffrabad and Majhgawa. The Alampur Jaffrabad cluster covered the villages of Khera, Kudda, and Makrandpur, whereas the Majhgawa

cluster included Kishanpur, Ismailpur, and Kanderpur. Under these field conditions, the average birth weight of kids was 2.11 ± 0.18 kg (N=40), while the mean body weights at 3, 6, and 12 months were 8.10 ± 0.92 kg (N=40), 11.89 ± 0.70 kg (N=40), and 22.47 ± 1.10 kg (N=40), respectively.

9. Salem Black Goat Unit, Veterinary College and Research Institute Salem, Tamil Nadu

PI: Dr. A.K. Thiruvenkadan, Professor & Head (AGB)



The All India Coordinated Research Project on Salem Black Goats is being implemented with a nucleus flock located at the Veterinary College and Research Institute, Namakkal. As of 01.04.2025, the nucleus flock comprises 232 animals, which include 6 bucks, 131 does, 40 male kids, and 45 female kids. A total of four clusters were selected across the districts of Erode, Salem, Dharmapuri, and Namakkal. A total of 22 farmers were registered and 604 adult female goats were covered. Herd sizes in the breeding tract vary from 2-5 and 50 to 70 goats, with an average herd size of 31 animals. The distribution of herd sizes among farmers is as follows: 1.8% keep 0–10 goats, 24.6% have herds of 11–20 goats, 43.8% maintain 21–30 goats, 10.5% manage 31–40 goats, and 19.3% rear more than 40 goats. The estimated population of Salem Black goats within their breeding tract was 8,40,199, accounting for 10.32% of the total goat population in Tamil Nadu. In the nucleus flock the average birth weight was 2.19 ± 0.02 kg (n=675) observations. The average body weights at 3, 6, 9, and 12 months were 9.29 ± 0.07 kg, 12.83 ± 0.10 kg, 16.08 ± 0.14 kg, and 19.30 ± 0.17 kg, respectively. In comparison, goats in the farmers' flocks (n = 85) recorded a slightly higher birth weight of 2.50 ± 0.10 kg, while the average body weights at 3, 6, 9, and 12 months were 8.60 ± 0.20 kg, 12.10 ± 0.30 kg, 14.00 ± 0.20 kg and 19.60 ± 0.50 kg, respectively. The data indicate that while birth weights were higher in the farmers' flocks, the overall postnatal growth rates were relatively better in the nucleus flock, particularly during the early growth stages. The age at first kidding was slightly higher in the nucleus herd at 15.23 ± 0.4 months, compared to 14.8 ± 0.2 months in the farmers' herds. Weight at first kidding was 23.45 ± 0.38 and 18.45 ± 0.23 kg, respectively in nucleus and farmers' flock. The incidence of single births was nucleus herd and farmers' herd was 85% and 67%, respectively. In contrast, twin and triple births were more frequently observed in farmers' herds, accounting for 23 and 10%, respectively, compared to 14 and 0.5% in the nucleus herd. Capacity-building programs were conducted for farmers in Mecheri, Bargur, and Dharmapuri districts.

10. Sojat Goat Unit, Rajasthan College of Agriculture, MPUAT, Udaipur

PI: Dr. Sidharth, Associate Professor (AGB)



AICRP on Goat Improvement – Sojat Goat Unit was sanctioned to the University as Non-Funding Unit till 26.03.2026 in May 2024. Presently we have nucleus flock of 15 adult doe and 3 adult bucks at farm. The recording of observation with respect to growth, productive and reproductive performance of the nucleus flock will be initiated soon. The survey was completed at the time of registration, the adult body weights in the field ranged between 42 to 58 kg in male and 34 to 40 kg in female at 12 months of age. the milk yield ranged between 0.8 to 1.5 litre per day with mean lactation length of 232.92 days. The age first mating was 397.92 and 517.40 in males and females respectively while age at first conception and kidding were 519.29 and 708.58 days. The service period ranged between 170 to 202.5 days. The work on initial selection of clusters and farmers has been initiated, few clusters namely Sojat, Bagri, Bilara and

Jaitaran were visited to finalize cluster based on the goat keepers and sojat goat in the area. Two days training, health camp and input distribution programme was organized at Siyat. A total of 85 scheduled caste and other farmer beneficiaries were trained on various aspects of scientific goat rearing. A health camp in which deworming and other medications were given to beneficiary farmers. Furthermore, a total of 70 quintal balanced feed was also distributed to beneficiary farmers.

11. Sojat Goat, LRS Vallabhnagar, Udaipur (Rajasthan)

PI: Dr. M.L. Gujar, Assistant Professor (AGB)



The nucleus flock maintained 34 goats in the campus. A total of 11 villages (05 villages in Pali and 6 villages in Jodhpur districts of Rajasthan) were selected under the Non-Funding Unit (NFUS) Sojat Unit, LRS, Vallabhnagar, Udaipur (RAJUVAS, Bikaner) to carry out project work. Based on the initial survey interaction with the goat farmers, 06 villages namely Khangta, Sangin, Papidcity, Sindhipura, Jawasia, Pipad from Jodhpur district, 05 villages Pachunda Khurd, Pachunda Kala, Siyat, Dhandhedi, Alawas from Pali district of Rajasthan were considered for the study. A total of 70 farmers from 11 villages of 2 districts. Baseline survey was conducted in each village for collection the baseline information about the goat rearing practices and to know the socio-economic conditions of the goat farmers of these villages. In survey area 21% maximum farmers belong to age (46-55 years) out of 70 total farmers of two districts. The survey results show that most of the farmers (36%) belong to MBC category. Farmer's main occupation was Animal Husbandry (20%) the family member's statics was 5-8 members maximum 33 per cent in survey area. Most of the farmers belongs land less category (60%). Flock composition 57.05 per cent doe followed by kid (28.19%) in survey area. The survey results show that maximum (59%) family is nuclear type. Their house of residence is pakka (47%) among survey area. Kids were weighed at birth, 3- and 6-month of age. Most of the goats produce twine at farmers' flock. The flock strength in the nucleus flock, situated at LRS, Vallabhnagar, Udaipur, was 34 where females and male animals were 25, 9, respectively. The average body weights of kids (Farm) at birth, 3 and 6 months of age were 3.57±0.72, 12.42±4.16 and 15.32±0.81 kg, respectively. The average body weights of kids (Field) at birth, 3 and 6 months of age were 3.29±0.09, 11.72±0.31 and 14.64±0.70 kg, respectively in the farmers' flocks of selected districts of Rajasthan.

8. Future Programme Activities, Timeline and Targets

Project Coordinating Unit, CIRG, Mathura Dr. M. K. Singh, Principal Scientist (AGB) & Incharge, AICRP on Goat Improvement
Activity Assigned and Targets
• Evaluation of field / farm units. • Compilation of annual progress report • Preparation of PC report for 23rd ARM. • Organization of Annual Review Meet • Preparation and submission of monthly, quarterly targets & achievements. • Compilation and presentation of different format required for data collection and presentation • Compilation of success story • Release of fund • PFMS Operational for all the units. • Monitoring of implementation of technical programme • Organizing online meeting • Implementation of ATR by different units • Impact assessment of AICRP Goat Units • Prepare review paper of cross-breeding experiences in India

Common Points (Target/Activities) for Farm Units

1. Establishment of 3-4 multiplier flocks / commercial farms to develop germplasm resource centres
2. and model goat farms
3. Grading up of > 500 non-descript goats in the home tract of the breed
4. Organization of 5–8 training programmes for > 400–500 farmers per year
5. Separate sire line for milk and growth
6. Implementation of a progeny testing programme for milk
7. Assessment of Feed Conversion Ratio (FCR) with different feed compositions

Unit-wise Additional / Specific Target and Activities

Barbari Unit

- Grading up of 1000 non-descript goats (higher target than others)
- Coordinate sale of > 1000 purebred goats for field improvement by multiplier flock
- Development of 20 Self Help Groups (SHGs) of Barbari goat farmers

Jamunapari Unit

- Collaborative research and improvement programme with the State A.H.

Sirohi Farm Unit

- Optimization of reproductive traits to enhance overall goat productivity
- Development of 2-3 management practices and technologies for enhancing productivity

Common Points (Target/Activities) for Field Units

1. Selection of 200–250 farmers with 2000–2500 goats per year
2. Identification of goats, pedigree, and performance recording of 1000 goats per year
3. Selection of 50–75 male kids for breeding and distribution of 25–30 bucks out of them
4. Establishment of 2–3 multiplier flocks
5. Organization of a minimum of 6–8 training programmes for 300–350 farmers per year
6. Prophylactic support to 2000 goats per year

7. Improvisation / establishment of 2–3 goat houses as models in participatory mode
8. Separate analysis of nucleus and field data
9. Assessment of Feed Conversion Ratio (FCR) with 40% concentrate and 60% roughage at the nucleus flock
10. Grading up of 400–600 non-descript goats by sale/supply of superior bucks
11. Collaboration with State / NGO for enhancing goat productivity, survivability, and marketability

Unit-wise Additional / Specific Target and Activities

Assam Hill Unit

- Optimization of reproductive traits to enhance overall goat productivity
- Collaboration with State / NGOs for productivity, survivability, and market enhancement
- Management practices for the rainy season
- Initiate goat improvement activities in other North-East states

Changthangi Unit

- Functional linkage for fibre utilization (processing)
- Milk yield to be recorded in 20% or at least 100 goats
- Measures to increase fibre quality and quantity
- Collection of information on constraints faced by goats and goat keepers during migration
- Reproductive performance data in 500 goats

Gaddi Unit

- Functional linkage for fibre utilization (processing)
- Milk yield to be recorded in 20% or at least 100 goats
- Collection of information on constraints faced during migration
- Development of management protocol for migration
- Functional linkage for fibre processing and marketing

Ganjam Unit

- Exploration of Ganjam goats' potential for growth, milk, and litter size under optimum conditions
- Establishment of Nucleus Flock at university farm complex

Chaugarkha Unit

- Field activities to be intensified with more farmers and other districts
- Focus on strengthening data collection and collaboration with state A.H. department
- Grading-up of 200-300 non-descript goats

Malabari Unit

- Grading up of 500–600 non-descript goats
- Collaboration with State / NGOs for better productivity and survivability

Marwari Unit

- Data to be recorded and analysed precisely
- Animals to be tagged for accurate data recording
- Assessment of the impact of distributed bucks and their utilization in clusters; results to be presented in ARMs

Osmanabadi Unit

- Inclusion of more animals in different clusters
- Strengthening / establishing multiplier flocks targeting sustainable genetic improvement and breed conservation

Sangamneri Unit

- Initiation / strengthening of multiplier flocks for sustainable improvement and breed conservation
- Measures to minimize crossbreeding with Jamunapari and Sojat
- Intensification of field improvement activities

Sirohi Farm Unit

- Grading up of 550-650 non – descript goats

Surti Unit

- Intensification of field activities and strengthening of Nucleus farm at campus
- Grading-up of non-descript goats with Surti bucks

Pantja Unit

- Grading up to be intensified with new bucks
- Housing design to minimize predation

Black Bengal, Patna

- Grading up to be intensified with new bucks
- Housing design to minimize predation

Bundelkhandi Unit

- Animal identification to be ensured
- Milk recording in the nucleus flock and 200 field goats
- Identification of reasons for high abortion rates and implementation of immunization measures

Beetal Unit

- Data to be collected, analyzed, and presented as per AICRP format
- Estimation and presentation of Beetal goat population in its home tract during ARM
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9. FINANCIAL / ADMINISTRATIVE DETAILS OF AICRP ON GOAT IMPROVEMENT 2024-25

Budget Allocation and Fund Provisions

Table 1: Comprehensive Head wise RE for the financial year 2024-25

Revised Estimates Head wise 2024-25 (Rs. 589)						
S. No.	**Head**	**Other than NEH &TSP**	**NEH**	**TSP**	**SCSP**	**Total**
A	**Grants for creation of Capital Assets (CAPITAL)**					
1	Works					
	a) Land	00	00	00	00	00
	b) Building	00	00	00	00	00
	(i) Office building	00	00	00	00	00
	(ii) Residential building	00	00	00	00	00
	(iii) Minor works	35.94	00	00	00	35.94
2	Equipment	29.71	1.00	00	00	30.71
3	Information Technology	4.85	00	00	00	4.85
4	Library books & Journals	00	00	00	00	00
5	Vehicle & Vessels	00	00	00	00	00
6	Livestock	30.50	00	00	00	30.50
7	Furniture & Fixtures	0.00	00	00	00	0.00
8	SCSP	0.00	00	00	5.00	5.00
	Total Capital (Grants for creation of Capital Assets)	**101.00**	**1.00**	**00**	**5.00**	**107.00**
B	Grant-in-aid: General (REVENUE)					
	Traveling allowances					
	a) Domestic TA/Transfer TA	00	00	00	00	00
	b) Foreign TA	00	00	00	00	00
	Total Traveling Allowances	**00**	**00**	**00**	**00**	**00**
	Research & Operational Expenses	00	00	00	00	00
	Total Research & Operational Expenses	**386.00**	**9.00**	**37.00**	**50.00**	**482.00**
	Administrative Expenses					
	Total - Administrative Expenses	0	0	0	0	0
	Miscellaneous Expenses					
	Total - Miscellaneous Expenses	00	00	00	00	00
	Total Grants in Aid – General	**386.00**	**9.00**	**37.00**	**50.00**	**482.00**
	Grand Total (Capital + Revenue)	**487.00**	**10.00**	**37.00**	**55.00**	**589**

Table 2: Head-wise Progressive Budget allocation & Actual Expenditure from 2021-22 to 2024-25

Head	2021-22 (RE)	2022-23 (RE)	2023-24 (RE)	2024-25 (RE)
A. CAPITAL				
1. Works	00	00	00	00
A. Land	00	00	00	00
B. Building	00		00	00
(i) Office Building	00	00	00	00
(ii) Residential building	00	00	00	00
(iii) Minor works	7.80	3.50	33.25	35.94
2. Equipment	8.87	7.50	21.25	30.71
3. Information Technology	1.33	00	11.50	4.85
4. Library Books & Journals	0	00	00	00
1. Vehicles	0	00	00	00
6. Livestock	1.00	00	33.00	30.50
7. Furniture & fixtures	00	1.00	1.00	00
8. Others (specify)	00	00	00	00
9 SCSP	00	00	5.00	5.00
Total Capital (A)	**19.00**	**12.00**	**105.00**	**107.00**
1. Establish. expenses Salaries	00	00	00	00
i. Establish. Charges-Regular	00	00	00	00
ii. Establish. Charges-Arrears	00	00	00	00
2. Traveling Allowances	00	3.00	00	00
a) Domestic T.A.	00	3.00	00	00
b) Foreign T.A.	00	00	00	00
4. Research & Operational Expenses	**381.00**	**315.00**	**425.00**	**482.00**
5. Administrative Expenses	00	00	00	00
a) Infrastructure	00	00	00	00
b) Communication	00	00	00	00
c) Repairs & Maintenance	00	00	00	00
6. HRD	00	00	00	00
a) Within India	00	00	00	00
b) Abroad	00	00	00	00
7. Other items, if any, (specify)	00	00	00	00
Total Revenue (B)	381.00	318.00	425.00	482
Grand Total (A+B)	**400.00**	**330.00**	**530.00**	**589.00**

Table 3: Head Wise & Unit Wise Revised Estimate for the Financial Year 2024-25

S.No.	AICRP on Goat Improvement	Capital										
		Work	NEH	SCSP	Equip.	Informa. Tech	Live-stock	Contingency				
								Gen.	SCSP	NEH	TSP	RE
1	Andaman Goat Unit, CIARI, Port Blair	1.00	0.00	0.00	1.50	0.00	3.00	16.50	0.50	0.00	5.00	27.50
2	Assam Hill Goat Unit, AAU Khanpara, Guwahati (NEH)	0.00	1.00	0.00	0.00	0.00	0.00	16.50	2.00	9.00	0.00	28.50
3	Bengal Goat Unit, BAU, Ranchi	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	Changthangi Goat Unit, SKUAST-K, Leh	2.00	0.00	0.00	2.00	0.00	1.00	16.50	0.00	0.00	6.00	27.50
5	Gaddi Field Unit, HPKV, Palampur (HP)	3.46	0.00	0.00	0.00	0.54	2.00	17.00	0.00	0.00	5.60	28.60
6	Ganjam Field Unit, OUAT, Bhubaneshwar	2.50	0.00	0.00	1.00	0.00	0.00	16.50	2.00	0.00	0.00	22.00
7	Malabari Field Unit, KVA & S, Trissur Kerela	0.00	0.00	1.00	2.00	0.00	2.00	16.50	3.00	0.00	2.00	26.50
8	Marwari Field Unit, RAJUV & AS, Bikaner	2.50	0.00	0.50	0.00	0.00	0.00	17.00	5.00	0.00	0.00	25.00
9	Osmanabadi Unit, NARI, Phaltan (MH)	1.50	0.00	0.50	1.00	0.00	1.50	16.50	4.00	0.00	0.00	25.00
10	Sangamneri Field Unit, MPKV, Rahuri	1.00	0.00	1.00	1.00	1.00	3.00	16.50	5.00	0.00	0.00	28.50
11	Sirohi Field unit, RAJUV&AS, Vallabhnagar	1.00	0.00	0.00	1.00	0.00	2.00	16.50	1.00	0.00	4.85	26.35
12	Surti Field Unit, Kamdhenu University (Guj.)	1.50	0.00	0.00	0.00	0.00	0.00	17.50	0.00	0.00	4.35	23.35
13	Uttrakhand Goat Unit, GBPUA&T, Pantnagar	1.50	0.00	1.00	1.00	0.50	2.00	16.50	4.00	0.00	2.35	28.85
14	Beetal Goat Field Unit, GADVASU, Ludhiana, Punjab (New Unit) TSP	1.50	0.00	0.00	1.50	0.00	3.00	16.50	2.00	0.00	0.00	24.50
15	Himalayan Goat Unit, IVRI, Mukteshwar.	2.00	0.00	0.00	2.00	0.00	0.00	16.50	4.00	0.00	3.00	27.50
16	Bundelkhandi Goat Unit, IGFRI, Jhansi	2.00	0.00	1.00	1.00	0.00	2.00	16.50	3.00	0.00	1.85	27.35
17	Black Bengal Goat Unit, ICAR- RCER, Patna	2.00	0.00	0.00	1.00	0.50	3.00	16.50	4.00	0.00	2.00	29.00
18	Sirohi Farm Unit, CSWRI, Avikanagar	2.00	0.00	0.00	1.50	1.00	0.00	24.50	3.50	0.00	0.00	32.50
19	Barbari Farm Unit, CIRG, Makhdoom	3.50	0.00	0.00	5.91	0.11	3.00	33.00	3.50	0.00	0.00	49.02
20	P.C. Unit, CIRG, Makhdoom, Farah	3.00	0.00	0.00	4.18	1.20	0.00	29.50	0.00	0.00	0.00	37.88
	Total	**35.94**	**1.00**	**5.00**	**29.71**	**4.85**	**30.50**	**386.00**	**50.00**	**9.00**	**37.00**	**589.00**
	Grand Total	**107.00**						**482**				**589.00**

Table 4: Unit wise Fund utilization during 2024-25

S.No.	AICRP on Goat Improvement	Fund Release 2024-25	Fund Utilized 2024-25	% Fund Utilization
1	Andaman Goat Unit, CIARI, Port Blair	27.50	27.48	99.93
2	Assam Hill Goat Unit, AAU Khanpara, Guwahati (NEH)	28.50	28.34	99.44
3	Changthangi Goat Unit, SKUAST-K, Leh	27.50	27.48	99.93
4	Gaddi Field Unit, HPKV, Palampur (HP)	28.60	28.60	100.00
5	Ganjam Field Unit, OUAT, Bhubaneshwar	22.00	21.40	97.27
6	Malabari Field Unit, KVA & S, Trissur Kerela	26.50	26.50	100.00
7	Marwari Field Unit, RAJUV & AS, Bikaner	25.00	24.98	99.92
8	Osmanabadi Unit, NARI, Phaltan (MH)	25.00	25.00	100.00
9	Sangamneri Field Unit, MPKV, Rahuri	28.50	28.50	100.00
10	Sirohi Field unit, RAJUV&AS, Vallabhnagar	26.35	26.33	99.92
11	Surti Field Unit, Kamdhenu University (Guj.)	23.35	22.66	97.04
12	Panta (Uttrakhand) Goat Unit, GBPUA&T, Pantnagar (TSP)	28.85	28.41	98.47
13	Beetal Goat Field Unit, GADVASU, Ludhiana, Punjab (New Unit) TSP	24.50	24.50	100.00
14	Himalayan Goat Unit, IVRI, Mukteshwar.	27.50	26.62	96.80
15	Bundelkhandi Goat Unit, IGFRI, Jhansi	27.35	27.33	99.93
16	Black Bengal Goat Unit, ICAR- RCER, Patna	29.00	28.68	98.90
17	Sirohi Farm Unit, CSWRI, Avikanagar	32.50	32.47	99.91
18	Barbari Farm Unit, CIRG, Makhdoom	49.02	49.02	100.00
19	Jamunapari Farm Unit, CIRG, Makhdoom	43.60	43.60	100.00
20	P.C. Unit, CIRG, Makhdoom, Farah	37.88	37.88	100.00
	Total	**589.00**	**585.78**	**Av. 99.37**



AICRP on Goat Improvement
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Proceedings

22nd Annual Review Meet (ARM) of AICRP on Goat Improvement

The 22nd Annual Review Meet of AICRP on Goat Improvement was held on October 15-16, 2024 at CSK-HPKV, Palalpur, Himanchal Pradesh in hybrid mode. The meet was inaugurated on October 15, 2024 in the Conference Hall of HPKV. It was chaired by Dr. Naveen Kumar, Hon'ble Vice Chancellor, CSK-HPKV, Palampur, Himanchal Pradesh and Co-chaired by Dr. Raghvendra Bhatta, DDG (AS), ICAR, New Delhi, Dr. G.K. Gaur, Assistant Director General (Animal Production and Breeding), ICAR, New Delhi and Dr. Manish K Chatli, Director, ICAR-CIRG, Makhdoom, Mathura. The meeting was attended by Dr. M. K. Singh, Incharge, AICRP on Goat and all the Principal Investigators and/Co-investigators of funding (farm-3 and field-16) and non-funding (11) units (on-line mode). The list of the participants is given below:

S. No.	Name of the unit	Name of the participant	PI/Co-PI
Funding Units (Physical Mode)			
1	Director, ICAR-CIRG	Dr. Manish K. Chatli	Director & PC
2	AICRP on Goat, ICAR-CIRG	Dr. M. K. Singh	In-charge PC
3	Andaman Field Unit	Dr. Rafequee	Co-PI
4	Assam Hill Field	Dr. Arpana Das	Co-PI
5	Barbari Farm Unit	Dr. M. K. Singh	PI
6	Jamunapari Farm Unit	Dr. M. K. Singh	PI
7	Beetal Field Unit	Dr. Arunbeer Singh	PI
8	Black Bengal Field Unit, Patna	Dr. Shankar Dayal	PI
9	Bundelkhandi Field Unit	Dr. Pooja Tamboli	PI
10	Changthangi Field Unit	Dr. Feroz Din Sheikh	PI
11	Gaddi Field Unit	Dr. Nishant Verma	PI
12	Ganjam Field Unit	Dr. Chinmoy Mishara	PI
13	Himalayan Field Unit	Dr. Indrasen Chauhan	PI
14	Malabari Field Unit	Dr. R. Thirupathy	PI
15	Marwari Field Unit	Dr. Vishnu Kumar	PI
16	Osmanabadi Field Unit	Dr. Chandra Nimbkar	PI
17	Sangamneri Field Unit	Dr. Ravindra Nimase	Co-PI
18	Sirohi Farm Unit, Avikanagar	Dr. S. S. Misra	PI
19	Sirohi Field Unit	Dr. R. K. Nagda	PI
20	Surti Field Unit	Dr. Gaurav Pandya	PI
21	Uttarakhand Field Unit	Dr. Rabendra Sharma	PI
22	Assam Hill Field	Dr. Maradona Nath	Co-PI
23	Beetal Field Unit	Dr. Neeraj Kashyap	Co-PI
24	Gaddi Field Unit	Dr. Varun Sankhyan	PI
25	Gaddi Field Unit	Dr. Ankur Sharma	PI
26	Gaddi Field Unit	Dr. Ankaj Thankur	PI
27	Gaddi Field Unit	Dr. Madhu Suman Sambyal	PI
28	AICRP PC Unit	Dr. Rakesh Kaushik	RA
29	AICRP-Barbari Unit	Mr. Akhilesh Kumar	YP-II

Non-Funding Units (Institutional Support) - Online Mode			
1	Anjori Field Unit	Dr. R. C. Remteke	PI
2	Rohilkhandi Field Unit	Dr. Hari Om Pandey	PI
3	Black Bengal Field Unit	Dr. Shyamal Naskar	PI
4	Black Bengal Field Unit	Dr. Ajoy Mandal	PI
5	Black Bengal Field Unit	Dr. Nandini Kumari	PI
6	Bidri Field Unit	Dr. N. Anadkumar	PI
7	Jakhrana Field Unit	Dr. M. K. Singh	Co-PI
8	Jakhrana Field Unit	Dr. Yogesh Bagar	PI
9	Sojat Field Unit	Dr. M. L. Gurjar	PI
10	Sojat Field Unit	Dr. Sidhhartha Mishra	PI
11	Salem Black Field Unit	Dr. A. K. Thiruvenkadan	PI

The inaugural session started with a formal welcome of dignitaries by Dr. Manish K Chatli, Director, ICAR-CIRG, Makhdoom and Dr. Ravindra Kumar, Dean COVAS, CSK-HPKV, Palampur. The Director ICAR-CIRG, Dr. Manish K. Chatli presented an overview of the AICRP on Goat Improvement, highlighting the role of goats in ensuring livelihood security of goat farmers, their future prospects as an industry, and the nutritional and medicinal benefits of goat products and also extended a hearty welcome to honorable VC and DDG (AS), ADG (AP&B) and all the delegates. Dr.

G.K. Gaur, ADG (AP&B), ICAR, New Delhi, in his address highlighted the history (chronological overview) of AICRP on Goat since beginning from 1971. He emphasized on enhancing goat productivity by precisely selecting superior animals and their utilization through selective breeding. He also focused for the development of goat improvement infrastructure in the form of nucleus and multiplier flocks and their utilization in sustainable goat improvement and conservation. Dr. Raghvendra Bhatta, DDG (AS), ICAR, New Delhi, summarized goat population trend in the country and emphasized on development and adoption of farmers friendly innovations and technologies and road map for their effective adoption. He also emphasized on judicious utilization of AICRP fund, properly implementation of technical program and effective monitoring of the AICRP centers. He briefed the unit in-charges to prepare road map to resolve breed and region-specific challenges of goat farmers particularly from disadvantageous regions. He also accentuated to explore establishment of seed unit in PPP mode.

Dr. Naveen Kumar, the Hon'ble Vice Chancellor of CSK-HPKV, Palampur, emphasized the significance of livestock as a key component of integrated farming systems in the cold arid mountain region. He also highlighted the economic value of the Gaddi Goat and its various uses. He also suggested to develop climate-based advisory particularly for migratory flocks. The program was followed by the release of publications, Project Coordinator's Report, Bulletin and Policy Paper by PC Cell, AICRP on Goat Improvement, ICAR-CIRG. Dr. Nishant Verma, Assistant Professor at CSK-HPKV, Palampur, extended the vote of thanks.

The entire review meet was conducted in four technical sessions and all the sessions were chaired by the DDG (AS), co-chaired by the ADG (AP&B) and Director-CIRG. Dr. M K Singh, In- charge PC unit and Head AG&B acted as a rapporteur. The 1st technical session started with presentation of project coordinators report by Dr. M.K. Singh. He presented the ATR of 21st ARM proceedings followed by progress report of all the 20 units highlighting significant achievements and outcome made during 2023-24. He also highlighted major points discussed in two online meetings conducted on 17 May and 5 August, 2024 with respect to technical program, targets, outcomes and impact assessment.

The Progress of following field units was presented in the ***Technical Session I.***

(i) Andaman Goat Field Unit, ICAR-CARI, Port Blair
(ii) Assam Hill Goat Field Unit, AAU, Khanapara, Guwahati
(iii) Black Bengal Field Unit, ICAR-RCER, Patna

The Progress reports of following field units were presented in ***Technical Session II.***

(i) Changthangi Goat Field Unit, SKUAST-K, Leh (J&K)
(ii) Ganjam Field Unit, Bhubaneswar
(iii) Himalayan Local Goats Field Unit, IVRI, Mukteswar
(iv) Malabari Goat Field Unit, Mannuthy
(v) Marwari Goat Field Unit, Bikaner
(vi) Osmanabadi Goat Field Unit, Phaltan
(vii) Sangamneri Field Unit, MPKV, Rahuri
(viii) Sirohi Goat Field Unit, Vallabhnagar
(ix) Surti Goat Field Unit, Navsari

The Progress reports of following field and farm units were presented in ***Technical Session III.***

(i) Uttarakhand Local Goat Field Unit, GBPUA&T, Pantnagar
(ii) Bundelkhandi Field Unit, Jhansi
(iii) Beetal Field Unit, GADVASU, Ludhiana
(iv) Gaddi Field Unit, CSK-HPKV, Palampur
(v) Sirohi Unit, ICAR-CSWRI, Avikanagar
(vi) Barbari Unit, ICAR-CIRG, Makhdoom
(vii) Jamunapari Unit, ICAR-CIRG, Makhdoom

The Progress report of non-funding units was presented via Zoom Meeting in ***Technical Session IV.***

(i) Anjori Unit, DSVCKV, Durg, Chhattisgarh
(ii) Black Bengal Unit, BAU, Ranchi
(iii) Black Bengal Unit, ICAR-NDRI-ERS, Kalyani, West Bengal
(iv) Black Bengal Unit, ICAR-IVRI-ERS, Kolkata, West Bengal
(v) Birdi Unit, Bidar, Karnataka
(vi) Jakhrana Unit, ICAR-CIRG, Makhdoom, Uttar Pradesh
(vii) Jakhrana Unit, LUVAS, Hisar, Haryana
(viii) Rohilkhandi Unit, ICAR-IVRI, Izatnagar
(ix) Sojat Unit, RAJUVAS, Bikaner
(x) Sojat Unit, MPUA&T, Udaipur, Rajasthan
(xi) Salem Black Unit, Veterinary College and Research Institute, Namakkal, Tamilnadu

Finally, in the plenary session, Dr. M K Singh presented the major recommendations emerged out of two days discussion. Dr. G K Gaur, ADG on his closing remarks opinioned to take corrective action for the efficient implementation of breeding plan, proper precautions in the construction of selection index for dairy, dual-purpose and meat goat breeds. He also stressed on developing capacity of nucleus flock of field and farm units, and multiplier flocks revisiting the targets for the different units. He also cautioned Assam Hill, Bundelkhandi, Surti, Sangamneri and Marwari units to strengthen activities in field as per technical program and recommendations. He emphatically mentioned that all the units should fulfill the targets and non-compliance may lead to closure of the units.

Dr. Raghavendra Bhatta, DDG (AS) underlined that the centers should improve their output and outcome and the underperforming centers will be dropped. He accentuated to fix the challenging targets rather than soft. He further informed that the systematic study and evaluation should be conducted to carry out impact analysis of all the centers (breed-wise) and report should be submitted before next AICRP.

Dr. Manish Kumar Chatli, Director submitted his gratitude to ADG (AP&B) and DDG (AS) for critically evaluating the performance of all AICRP units. He informed the house that on-line portal of AICRP reporting (www. pcgoatcirg.icar.gov.in) is functional and in future all reports and details will be available on it. He asserted all the unit in-charges to follow guidelines and objectives of AICRP and

stressed to make presentations and reports as per the template already circulated to them. He asked all the non-funding units to work hard to achieve the targets, because their funding in next EFC will be approved only on the basis of their performances.

The following recommendations emerged during presentations:

General Recommendations

1. The AICRP fund should be judiciously and efficiently utilized as per priority to address core activities/objectives.
2. Targets for each unit should be fixed in the beginning with respect to farmers flock, nucleus flock, multiplier flock, commercial farm, grading up and women/men farmers trained.
3. A population of 5000-8000 should be covered under the program. General parameters/observations should be obtained from entire population while important parameters should be recorded from animals maintained at the nucleus flock, multiplier flock and progressive farmers. AICRP should be duly acknowledged in all the relevant documents.
4. Farm nucleus flock should maintain minimum 300 breedable does and field nucleus flock should maintain 75-100 breedable does.
5. Genetic analysis of data should be conducted by appropriate standards. Data should be precisely collected and a team of 5 scientists at different units should be formed to analyze data using advanced analysis software.
6. Weight should be recorded at birth, 3, 6, 9, and 12 months. Breeding values should be estimated based on milk yield, body weight, and prolificacy. While setting the targets, the standard deviation of the traits should be properly analyzed based on 10/20 years data.
7. The nutraceutical properties of milk be identified, validated and documented by CIRG.
8. Infrastructure (semen cryo-preservation lab) and elite bucks available at nucleus flock with farm and field units should be utilized to promote artificial insemination in goats under field.
   A Committee may be constituted for finalizing nutrient requirements for goats at different growth stages including products (milk meat, fiber etc.), management systems and agro- climatic regions.
9. Multi-disciplinary team should be formed within 30 days and circulated to PC. Template of presentation should include name of Co-PIs, discipline and work assigned.
10. Short video recordings should be made for important activities, management practices, innovations, success stories and constraints faced by the farmers. Moreover, Good PoP (Package of practices) for migratory flocks in different regions/seasons should be developed. Separate package of practices should be prepared for small, medium and large flocks.
11. The complete history of all AICRP centers from the beginning should be compiled including performance and achievements, etc. Five-year data should be reported in annual review meet.
12. RA/SRF should be dropped from all AICRP Field and Farm Units.
13. Climate based management advisory should be given to different regions particularly for migratory flocks.
14. All those units which are graded as C or D should be physically visited by PC Cell on priority up to December 2024 and their status report should be submitted separately to ICAR HQ, New Delhi.

Breed Specific Recommendations

Andamani Goat Unit

1. Crossbreeding with other breeds (Jamunapari, Sirohi and Beetal) should not be encouraged. It is not the technical program of the project.
2. Management and breeding practices need to be adopted to increase the milk yield of doe.
3. A minimum of 150 breedable females should be kept at nucleus flock.
4. A total of 5000 goats should be covered under the program.
5. Proper data on 80-100 goats/ year should be recorded annually for milk production.
6. Five Multiplier flocks per year should be established.

7. The unit was graded as **A**.

Assam Hill Goat Unit

1. Field activities should be more vigorously taken up to address the technical program.
2. Minimum 100 breedable females should be kept at nucleus flock.
3. More bucks (>20) should be made available for the field improvement and such bucks should be rotated after every year from one cluster to another.
4. Grading-up should be taken up more vigorously in defined area.
5. Women-based clusters should be earmarked and promoted.
6. Multiplier flocks should be increased.
7. The unit was graded as **C.**

Black Bengal Goat Unit

1. Minimum 75 breedable females and 10 males should be kept at nucleus flock. More number of males (25-40/year) should be distributed /rotated in field for improvement.
2. Enroll 7000 goats in AICRP program with the support of grading-up, selective breeding, capacity building; however, precise data should be recorded from 3000 animals.
3. Age at first service and reproduction efficiency should be optimized for higher production.
4. Efforts need to be taken up to reduce pre-weaning kid mortality.
5. Lactation data on 75 females /year should be recorded for research/improvement purpose.
6. Multiplier flocks should be increased.
7. The unit was graded as **B.**

Beetal Goat Unit

1. Data should be recorded, analyzed and presented in standard format of AICRP.
2. More number of goats and farmers should be registered in the project (minimum 3000 goats).
3. More number of multiplier flocks should be established.
4. 100 breedable goats should be kept in nucleus flock.
5. Data from nucleus, progressive and multiplier flocks should be recorded, analyzed and presented in report.
6. The unit was graded as **B.**

Bundelkhandi Goat Unit

1. Flock size of nucleus herd needs to be strengthened to 100 females and 30 bucks.
2. Minimum 20 bucks need to be distributed/year for the field improvement.
3. A total of 5000 goats should be covered under the project.
4. Lactation performance at nucleus and multiplier flocks should be systematically recorded.
5. In-charge PC should visit the unit and take suggestive measures to improve the performance.
6. The unit was graded as **C.**

Changthangi Goat Unit

1. Data should be properly collected and quantified on 3000 animals.
2. A minimum of 75 females and 25 males should be kept at nucleus flock.
3. Farmer's friendly technologies and packages of practice should be developed and efforts should be made for their adoption, particularly during migration.
4. AICRP Grant may be provided in 2 installments only considering climatic conditions.
5. Age at first service may be optimized with respect to production performance.
6. Ten thousand goats should be covered under project.
7. Specific study should be conducted on goat rearing from beginning to end of the migration. Mineral profiling needs to be regularly conducted in grazing area.
8. The unit was graded as **A.**

Gaddi Goat Unit

1. More number of goats and farmers should be registered in the project.
2. Package of practices should be developed and disseminated separately for non-migration, sedentary migration (short/stationary) and long migration flocks.
3. More number of males should be distributed to farmers.
4. Challenges and constraints of goat farmers during migration should be depicted through short videos.
5. Efforts should be made to minimize mortality in farmers flocks.
6. Mineral profiling needs to be regularly done in grazing areas.
7. Strategies (road map) should be developed to minimize incidences of foot rot.
8. The unit was graded as **B.**

Ganjam Goat Unit

1. A total of 8000 goats should be enrolled in AICRP program with the support of grading-up, selective breeding, capacity building; however, precise data should be recorded from 3000 animals.
2. A minimum of 50 bucks/ year should be distributed to field for the improvement.
3. Migration route, pattern and challenges need to be studied properly.
4. A minimum of 100 breedable females should be maintained at nucleus flock with proper data recording of lactation traits.
5. Establishment of multiplier flocks must be encouraged.
6. The unit was graded as **B.**

Himalayan (Chaugarkha) Goat Unit

1. Field activities should be strengthened; a greater number of famers and goat flocks should be included in the project (minimum 1000 adult goats).
2. Grading-up program should be vigorously and seriously implemented.
3. Five multiplier flocks/ year should be developed with minimum of 20 adult female goats.
4. A nucleus flock should keep minimum of 150 breedable does.
5. The unit was graded as **B.**

Marwari Goat Unit

1. Field activities should be strengthened; a greater number of farmers and goat flocks should be included in the project (minimum 7000 adult goats).
2. A nucleus flock should keep minimum of 125 breedable does and 25 bucks.
3. Data should be precisely recorded and presented.
4. More number of bucks should be distributed to field for the improvement and rotated as per technical program.
5. Minimum 5 multiplier and 5 commercial flocks should be developed every year.
6. PC Cell should monitor project activities and outcome on priority and should appraise the progress to Headquarter.
7. The unit was graded as **C.**

Malabari Goat Unit

1. A minimum of 5 multiplier flocks should be established every year with a flock size of 30.
2. Nucleus flock should have 120 or more adult female goats.
3. Buck distribution should be >75/year.
4. Population of Malabari breed in the home tract should be determined using standard survey procedure.
5. A minimum of 5000 animals should be covered under AICRP in 2-3 districts.
6. The unit was graded as **A.**

Osmanabadi Goat Unit

1. A total of 4000 goats with more number of farmers should be covered in AICRP.
2. Data from inception of the project (year/period wise) should be analyzed and presented.
3. PC Cell should physically evaluate the activities and outcome of the unit.
4. The unit was graded as **A.**

Sangamneri Goat Unit

1. PI of the unit should be from AGB discipline. Participation of PI is mandatory in ARM. Co- PI is allowed to present the progress in ARM with due approval.
2. Farmers with good flock size should be supported. More number of multiplier flocks should be established.
3. Proper strategy needs to be made to minimize indiscriminate breeding/ cross-breeding in Sanagamneri flocks.
4. More than 5000 goats should be covered under the project.
5. In charge, AICRP should monitor and evaluate the activities in the operational area on priority and ensure that corrective measures as suggested in 21st ARM have been implemented. The progress made during 2023-24 should be appraised to ICAR HQ.
6. The unit was graded as **B.**

Sirohi Goat Field Unit

1. Chittorgarh goat farm should be considered as Nucleus Flock of Sirohi field Unit. The data of nucleus flock should be intensively recorded.
2. Possibilities may be explored to process the surplus milk through linkages with other organizations.
3. Community breed improvement models should be implemented in tribal/ backward and in disadvantageous regions.
4. A minimum of 5000 goats should be covered in AICRP.
5. The unit was graded as **A.**

Surti Goat Unit

1. Activities should be vigorously and seriously strengthened in field by covering more farmers and flocks (80-100 flocks). A minimum of 4000 Surti goats should be registered under the project.
2. This breed is on the verge of extinction; therefore, linkage with AHD and other state departments should be strengthened with defined objectives and action plan.
3. More number of multiplier flocks (4-5 per year) and commercial farms should be established.
4. More animals (100 female and 30 bucks) should be kept in nucleus flock. Data from farmers/ nucleus flock should be systematically recorded and presented.
5. Grading-up of non-descript goats should be implemented seriously and vigorously.
6. In charge, AICRP should monitor and evaluate the activities of the unit on priority (by December 2024) in the operational area and ensure that corrective measures as suggested in 21st ARM should be implemented. The progress made should be appraised to ICAR HQ.
7. The unit was graded as **C.**

Pantja Goat Unit

1. Number of multiplier flocks should be increased (4-5/year) and non-descript males should be castrated in the operational area.
2. Develop farmers' friendly technologies to minimize predation.
3. Operational area of Pantja goats must be expanded in other Tarai regions of UP and Uttarakhand.
4. Grading-up should be strengthened.
5. The unit was graded as **A.**

Barbari Goat Farm Unit

1. More number of multiplier flocks (>8/year) should be established.
2. Data from multiplier flocks should be collected/ obtained at regular interval, properly analyzed and be the part of AICRP.
3. High performing goats from multiplier flocks should be purchased for nucleus flock.
4. Population of Barbari goats should be determined in the home tract following standard procedures.
5. The unit was graded as **A.**

Jamunapari Goat Farm Unit

1. Efforts should be made to increase the milk yield of Jamunapari goats.
2. Farmers should be encouraged and supported to establish multiplier flocks.
3. Community breed improvement program should be initiated to increase the population and productivity in the home tract of Jamunapari goats.
4. Population of Jamunapari goats should be determined in the home tract.
5. The unit was graded as **A.**

Sirohi Goat Farm Unit

1. Four to Five multiplier flocks should be established and their performance data should be presented in ARM.
2. Performance data/ information should be compiled and analyzed from the beginning of the project.
3. The unit was graded as A.

Non-funding Units

- Non-funding units should maintain nucleus flock with 80-100 goats and collect data from field as per the technical program.
- Non-performing units will not be considered for funding in the next EFC



11. IMPACT OF INTERVENTIONS: PROFIT (INCOME) GENERATED UNDER AICRP-GOAT

S. No.	Premium Value generated from different sources	Value (₹ Cr)
1.	Premium Value generated from Adult Females Under AICRP	2,058.16
2.	Premium Value generated from Buck Distribution Under AICRP	991.71
3.	Improvement Body Weight of Kids Under AICRP	23.81
4.	Improvement in Milk Yield by Pedigree Bucks Under AICRP	5.59
5.	Improvement in survivability (savings)	37.27
Total		**3116.54**

Table1 (a). Premium Value generated from Adult Females under AICRP

Year	Total Females Considered	Survived Kids (After 5% Mortality)	Total Sale Value (₹14,000/adult)	Feeding & Other Cost (₹9,288/animal)	Net Profit (₹ Crores)
2021–22	5,731	38,111	53.36	35.4	17.96
2022–23	24,785	1,76,592	123.61	82.01	41.6
2023–24	1,13,080	7,51,982	526.39	349.22	177.17
2024–25	3,09,376	20,57,350	1,440.14	955.43	484.71
2025–26	13,38,050	88,98,032	6,228.62	4,170.46	2,058.16

Table 1(b). Premium Value generated from Buck Distribution under AICRP

Year	Bucks (no.)	Kids Produced (no.)	Surviving Kids (no.)	Male Kids (no.)	Value (₹ Cr)
2021–22	1,050	110250	104737	52368	73.32
2022–23	2,050	215250	204757	102378	143.33
2023–24	3,050	320250	304238	152119	212.97
2024–25	4,050	425250	403988	201994	282.79
2025–26	4,000	420000	399000	199500	279.30
Total	**14,200**	**1,491,000**	**1,416,720**	**708,359**	**991.71**

Table 1(c). Improvement Body Weight of Kids under AICRP

Year	No. of Kids	Avg. wt. (Pedigree) (kg)	Extra Gain (kg)	Rate (₹/kg)	Value (₹ Crores)
2021–22	1,470	22	32,340	350	1.13
2022–23	2,920	22	64,240	350	2.25
2023–24	7,016	22	1,54,352	350	5.4
2024–25	9,076	22	1,99,672	350	6.99
2025–26	10,445	22	2,29,790	350	8.04
Total	—	—	**6,80,394**	—	**23.81 Cr**

Table 1(d). Improvement in Milk Yield by Pedigree Bucks under AICRP

Year	Population	Females (40%)	Milk from Selected Buck (L) @ 125 litre	Extra Value (₹ crore) @ Rs.35/litre
2021–22	1,400	560	70,000	0.25
2022–23	3,920	1,568	1,96,000	0.69
2023–24	7,016	2,806	3,50,750	1.23
2024–25	9,076	3,630	4,53,750	1.59
2025–26	10,445	4,178	5,22,250	1.83
Total	**31,857**	**12,742**	**1,592,750**	**5.59 Cr**

Table 1(e). Premium value from Survivability under AICRP

Year	Kids Produced	Mortality (10%)	Value Lost @ 10% (₹ Cr)	Mortality (5%)	Value Lost @ 5% (₹ Cr)	Savings (₹ Cr)
2021–22	110,250	11,025	5.51	5,513	2.76	2.76
2022–23	215,250	21,525	10.76	10,763	5.38	5.38
2023–24	320,250	32,025	16.01	16,013	8.01	8
2024–25	425,250	42,525	21.26	21,263	10.63	10.63
2025–26	420,000	42,000	21	21,000	10.5	10.5
Total	**1,491,000**	**149,100**	**75.55**	**74,552**	**37.28**	**37.27**




BLOCK-C

अखिल भारतीय बकरी सुधार समन्वित शोध परियोजना

All India Coordinated Research Project on Goat Improvement



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