

Major General
Bhuwan Chandra Khanduri AVSM
(Retd.)



CHIEF MINISTER,
UTTARAKHAND

Secretariat Annexe,
DEHRADUN - 248001

Message

It is a matter of great pleasure to learn that, on the occasion of annual general body meeting the Uttarakhand Livestock Development Board is publishing its Annual Report for the year 2010-11.

In the State of Uttarakhand, animal husbandry plays an important source of income for farmers since only 13% of land is under cultivation for agriculture crops. Animal Husbandry also generates good employment opportunities besides providing valuable source of energy for agriculture operation. Uttarakhand Livestock Development Board is significantly contributing in providing Cattle & Buffalo breeding services at farmer doorstep as well as fodder development activities in the State.

I wish the publication of this Annual Report all the success.


(Bhuwan Chandra Khanduri)
Chief Minister

Trivendra Singh Rawat

Minister

Agriculture, Agriculture Education
Agriculture Marketing, Animal Husbandary,
Dairy Development, Fishery, Horticulture,
Food Processing, Disaster Management &
Technical Education



Govt. of Uttarakhand

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Date 14/11/2011

Message

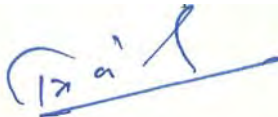
Agriculture and animal husbandry are parts of ancient Indian civilization. Study of ancient literature reveals that rivers of milk and curd were flown in the ancient India. The availability of high yielding Kamdhenu and Nandini breed of Cattle with our ancestors may be the reason of this.

Animal Husbandry together with Agriculture is backbone of the economy of the State of Uttarakhand. The State Government is implementing Fodder Bank Project, Krishi Mahotsava- Sarkar Kisan Ke Dwar programs etc. for the overall development of Agriculture along with Animal Husbandry in the State. The farmers are directly and indirectly getting benefits from these programs. The Uttarakhand Livestock Development Board is playing a pivotal role in implementing these programs in the State. Conservation, propagation & multiplication of endangered breed of Red Sindhi Cattle through use of embryo transfer technology, distribution of nutritious compact fodder blocks in economic manner through Fodder Bank project, gau mutra ark production etc. are the activities implemented by board are needed great applaud.

In the very short span of working by establishing one ISO 9001:2008 and HACCP certified deep frozen semen production center, two semen banks, 1312 artificial insemination centers, 2378 natural breeding centers, embryo biotechnology research & training center, two fodder banks, 47 sub fodder banks, 60 fodder grass nurseries and two training centers the ULDB is implementing breed improvement program, fodder development program, embryo transfer program and human resource development in successful manner.

In the active leadership of ULDB the development of Animal Breeding Farm, Kalsi as a center of excellence for animal husbandry and allied activity is not only providing training to the farmers of the State but also providing hands on practical demonstration of animal husbandry and farming activities to the professionals and non-professionals of other States.

I congratulate the members of the Board and the officers & staff of the ULDB & animal husbandry department towards making implementation of various programs a success. I believe that this publication will prove to be a useful document for professionals, non-professionals, organizations working in the field of animal husbandry. I wish the publication of this Annual Report all the success.


(Trivendra Singh Rawat)

Vinita Kumar (I.A.S.)

Forest & Rural Development Commissioner /
Principal Secretary (Medical Education, Ayush,
Forest & Environment)



Govt. of Uttarakhand

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Foreword

It is matter of great pleasure that after completing ten years successfully the Uttarakhand Livestock Development has entered in eleventh year of its operation. Alike the previous year's the board is publishing its Annual Report for the year 2010-11.

The State Government has created Uttarakhand Livestock Development Board for the implementation of centrally sponsored National Project for Cattle and Buffalo Breeding in the State of Uttarakhand.

Under breed improvement program the Uttarakhand Livestock Development is ensuring continuous non-interrupted door step delivery of quality frozen semen, Liquid nitrogen and other artificial insemination inputs to artificial insemination centers through two regional semen banks. For ensuring quality of frozen semen the deep frozen semen production center is accredited with ISO 9001:2008 and HACCP certification. The State is not only self reliant on frozen semen doses but also fulfilling requirement of other States. The Assam Livestock Development Agency has deputed Uttarakhand Livestock Development Board as consultant for the establishment of Frozen Semen Bull Station at Barapeta, Assam.

The Uttarakhand Livestock Development Board is implementing embryo transfer technology program for the conservation and propagation of Red Sindhi breed of indigenous cattle and production of pure Holstein Frisian and Jersey from the imported embryos. The identification of elite milch animals through field performance recording program is benefitting the livestock owners of the State through increased sale price of the identified animals and their progenies. The board is implementing progeny testing program for analyzing the production potential of the progenies born through artificial insemination in buffaloes.

Apart from implementing breed improvement program the Uttarakhand Livestock Development Board is also implementing Fodder Bank Project. Round the year availability of nutritious fodder is ensured through establishment of two compact fodder block manufacturing units and sub fodder banks. Uttarakhand Livestock Development Board is providing training to the farmers, professionals, para-professionals on latest scientific animal husbandry and allied subjects at its Pashulok and Kalsi Training Centers.

I extend my sincere thanks to Department of Animal Husbandry, Dairying & Fisheries, Ministry of Agriculture, Government of India for extending their active and timely support to Uttarakhand Livestock Development Board for the implementation of National Project for Cattle & Buffalo Breeding in the State of Uttarakhand.

I wish good luck to Uttarakhand Livestock Development Board. I anticipate that this detailed Annual Report 2010-11 will be helpful to the individuals and organizations working in the field of animal husbandry and dairy.

(Vinita Kumar)

Principal Secretary &
Forest & Rural Development Commissioner/
Chairperson, ULDB

A.K. Dhaundiyal
Secretary



Govt. of Uttarakhand

**Animal Husbandry &
Dairy Development
Govt. of Uttarakhand**

Preface

I feel happy to be associated with ULDB which is state implementing agency for the implementation of centrally sponsored National Project for Cattle & Buffalo Breeding in Uttarakhand State. The animal husbandry sector is playing a significant role in transforming food security into nutritional security, ensuring rural livelihood & exploring opportunities for entrepreneurship development. For successful commercialization of animal industry, there is need of optimization of animal production through enhancement of genetic potential, availability of nutritive feed & fodder, improvement of animal fertility and timely access to veterinary health care services.

The ISO 9001:2008 & HACCP certified deep frozen semen production centre, Shyampur targeted to produce more than 15 lakhs deep frozen semen doses in year 2010-11 not only catering to the need of the State but also supplying surplus doses to other States.

Under the NPCBB, the ULDB has established one State of Art Embryo Biotechnology Research & Training Centre at Animal Breeding Farm, Kalsi. The motive is to conserve, multiply & propagate Red Sindhi cattle breed. The centre is working as Bull mother farm for HF, Jersey & Red Sindhi Bull to cater the demand of elite bulls for deep frozen semen production program of the State of Uttarakhand & other States of the Country.

In the short period of its working the ULDB has done tremendous works in animal husbandry sector not only by increasing the organized breedable population coverage through door step delivery of artificial insemination & natural breeding services but also by implementing fodder development program throughout the State for ensuring better fodder production and round the year availability of nutritious fodder in cost effective manner.

For ensuring round the year availability of feed & fodder, the ULDB is implementing project of Fodder Bank to ensure fortified quality roughage in scarce periods as well as Fodder nurseries for wide spread cultivation of improved fodder grasses.

Livestock Insurance Scheme is benefiting livestock owners by increasing their risk bearing capacity from occasional loss of their valuable milch cattle & buffalo.

I extend my sincere thanks to Department of Animal Husbandry, Dairying & Fisheries, Ministry of Agriculture, Government of India & all other stakeholders for extending their active support to ULDB for successful implementation of NPCBB in the State.

I am sure that this publication would provide an excellent guidance to all organizations working in the field of animal husbandry and I wish the publication of Annual Report for the year 2010-11 all success.

(Arun Kumar Dhaundiyal)
Secretary,

Department of Animal Husbandry & Dairy,
Government of Uttarakhand

Members of the Board

Chairperson

Smt. Vinita Kumar,
Principal Secretary and
Forest & Rural Development Commissioner,
Government of Uttarakhand

Member

Representative,
Central Project Management Unit (NPCBB),
Department of Animal Husbandry, Dairying &
Fisheries,
Ministry of Agriculture,
Government of India,
Krishi Bhawan, New Delhi

Member

Shri Arun Kumar Dhaundiyal, Secretary,
Department of Animal Husbandry & Dairy,
Government of Uttarakhand

Member

Smt. Damyanti Dohre, Add. Secretary,
Department of Animal Husbandry,
Government of Uttarakhand

Member

Dr. A.S. Dhama, Director,
Department of Animal Husbandry,
Government of Uttarakhand

Member

MD,
Uttarakhand Cooperative Dairy Federation,
Mangal Padav, Haldwani (Nainital)

Member

Director,
Dairy Development Department,
Mangal Padav, Haldwani (Nainital)

Member

Dr. G.K. Singh, Dean,
College of Veterinary & Animal Sciences, G.B.
Pant University of Agriculture & Technology,
Pantnagar

Member

Project Director,
District Rural Development Agency, Dehradun

Member

Chief Project Coordinator,
BAIF State Office, Uttarakhand,
Survpriy Vihar, Near Ramdev Ashram,
Kankhal, Haridwar

Member

Shri Mohan Chand Durgapal,
Expert- Fodder Development,
Village: Halduchaud Deena,
Post: Halduchaud, Nainital

Member

State Director,
National Dairy Development Board,
Plot No. 3, Sector 1,
Noida, U.P.

Member

Campus In-charge,
Indian Veterinary Research Institute,
Mukhteshwar, Nainital

Member

Shri Devendra Bharti
Representative- Gaushala
Nainidanda (Patti Bijlot),
Pauri Garhwal

Member

Shri Pradeep Kumar,
Representative- Milk Cooperative,
Village: Tejpur, P.O.: Chudiyala, Haridwar

Member

Shri Anand Khadka
Representative- NGO,
Village: Nehru Gram,
Raipur, Dehradun

Member Secretary

Dr. Kamal Singh,
Chief Executive Officer,
ULDB, Dehradun



Executive Summary

Uttarakhand Livestock Development Board has been constituted as an autonomous body having its registration in Societies Registration Act, 1860 with its registered office at Dehradun bearing the registration No.343/2001-02 dated 27th June 2001. The Uttarakhand Livestock Development Board is state implementing agency for implementation of 100% centrally sponsored National Project for Cattle & Buffalo Breeding (NPCBB) in the State of Uttarakhand.

Objectives:

The main objective of the Uttarakhand Livestock Development Board is to encourage, facilitate and provide latest livestock (Cattle & Buffalo) breeding & livestock management techniques & services to the farmer in a self sustainable manner so as to enhance livestock productivity.

The objectives of ULDB are:

- To advise & assist the State Government in overall strengthening of the institutional set up under them dealing with breeding & development of cattle & buffaloes, their production & productivity & help in establishing appropriate new institutions to maximize returns on investments already made on cattle & buffaloes breeding infrastructure statewide.
- In coordination with the State Government to evolve & orchestrate Cattle & Buffalo breeding programs as per the State's breeding policy for continuously increasing outputs.
- To promote, organize & nurture institutions outside the Government (Cooperatives, NGOs, voluntary organizations, Gaushalas etc.) to generate quality-breeding inputs & for delivery of breeding services at the farmer's doorstep on progressively self-generating & economically viable basis.

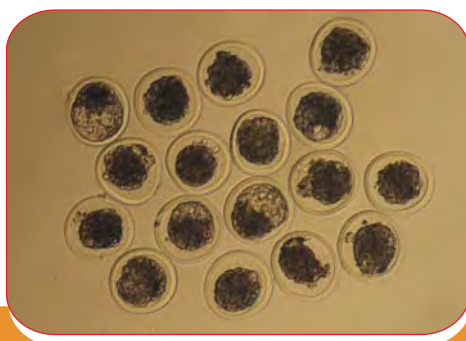




- Establishment of a network for uninterrupted supply of frozen semen & liquid nitrogen, establishment, modernization, strengthening of cattle & buffalo farms, to ensure availability of exotic & elite indigenous bulls for natural service.
- To produce desi & cross bred bulls of improved breeds/ characteristics for the natural breeding programs by adopting latest improved techniques for the care & management of the cattle & buffalo.
- To modernize & upgrade existing training facilities to enhance skills & professional competence at all level on a regular & continuing basis.

Achievements (2002-03 to 2010-11):

- **Artificial Insemination Program:** The board is supplying Deep Frozen Semen, Liquid Nitrogen & other breeding inputs to 1312 Artificial Insemination Centers on door delivery basis.
- **Natural Breeding Program:** The board has distributed 2378 elite bulls (cow bulls- 420 nos.; buffalo bulls- 1956 nos. & Yak Bulls- 2 nos.) on custodian basis for the natural breeding program in the remote hilly areas of the state where artificial insemination services are not available.
- **Organized Breedable Population Coverage:** During the year 2010-11 the organized breedable population coverage has reached to 41.69% (23.17% through Artificial Insemination & 18.52% through Natural Breeding).
- **Management Information System (MIS):** The ULDB has developed unique software for the monitoring of input distribution and breeding activities. The developed software has real time online data entry and SMS data entry facilities. The software developed is hosted at board's website www.uldb.org. ULDB has also developed software for the monitoring of field performance recording, livestock insurance scheme, dairy herd management software. Deep Frozen





Semen Production Center, Shyampur, Rishikesh is using Software for Managing Integrated Laboratory Environment (SMILE) in semen production program.

- **Training Program:** Under NPCBB the board has provided A.I., breeding & livestock management related trainings to 9811 trainees (Veterinary Officers/ Livestock Extension Officers/ Veterinary Pharmacists/ Private Artificial Insemination Workers/ Farmers) at esteemed organizations. The ULDB Training Center, Pashulok, Rishikesh has organized sponsored training programs for 4851 trainees. Animal Breeding Farm, Kalsi has organized sponsored training programs for 3132 trainees.
- **Training organized for other States:** ULDB Training Center and Embryo Biotechnology Research & Training Center has organized training programs for other States viz. Sikkim, Bihar, Maharashtra, Rajasthan, Himachal Pradesh, Kerala & Andhra Pradesh. A no. of visitors/ officials from other States, Boards & Institutions have also visited ULDB & its subsidiary units to learn about the setup & working pattern of ULDB.
- **Deep Frozen Semen Production Program:** The ISO 9001:2008 & HACCP certified Deep Frozen Semen Production Center (DFSPC), Shyampur, Rishikesh has produced 6872565 semen doses of the elite bulls of Holstein Friesian, Jersey, their crosses, Red Sindhi, Sahiwal & Murrah and distributed/ sold 6424805 semen doses for the artificial insemination program of the State and other States.
- **Embryo Transfer Program:** The Embryo Biotechnology Research & Training Center established under National Project for Cattle & Buffalo Breeding at Animal Breeding Farm, Kalsi is working for the conservation, propagation and multiplication of Red Sindhi breed of Indigenous Cattle. The center has produced 46 pure elite Red Sindhi Calves & preserved 137 pure Red Sindhi embryos. The center has also organized MOET training program for 7 professionals nominated by other States.





- **Animal Breeding Farm, Kalsi:** The Animal Breeding Farm, Kalsi is managing elite herd of 413 Red Sindhi & their crosses. Under National Project for Cattle & Buffalo Breeding the farm is strengthened as Bull Mother Farm. The farm is manufacturing cow urine distillate (gau mutra ark) from indigenous cow urine, vermi compost and organic manure. Silvipasture, silage making, bio-gas electricity generation, solar water heating system, organization of training programs etc. are the other activities implemented by the farm. The board has established one new Training Center at Animal Breeding Farm, Kalsi through the fund received from Rashtriya Krishi Vikas Yojana.
- **Field Performance Recording Program:** With the view of identifying elite milch animals for Bull Production Program a total of 4877 milch cows & buffaloes have been taken in field performance recording program out of which a total of 1425 cows & buffaloes are registered in herd book having performance above the minimum production parameter. The details of animals registered in Herd Book are available at board's website www.uldb.org.
- **Livestock Insurance Scheme:** The ULDB is State Implementing Agency for implementation of Livestock Insurance Scheme. The scheme is being implemented on 50% cost sharing basis for the insurance of animals for 01 and 03 year duration. Since the year 2009-10 the scheme is being implemented in Dehradun, Haridwar, Chamoli, Udham Singh Nagar, Nainital & Pithoragarh districts. A total of 18170 milch animals are being insured in the scheme. Against the total claims of 2043 a total of 1814 claims are settled & ₹ 272.09 lakhs have disbursed to the beneficiary farmers. Premium claim ratio of the scheme is 1 : 1.6138.
- **Fodder Development Project:** Under Abhinav Jawahar Rojgar Yojana the board has established Center of Excellence of Fodder in 18 Van Panchayats and 25 Government Farms covering 183.04 hectare land. Under Grass Land Development including Grass Reserve program the board has developed 17 Van Panchayats covering 90 hectare land. These centers have distributed 32384.10 qtl. Root Cuttings to the farmers and other organizations.
- **Fodder Bank:** The Compact Fodder Block Manufacturing Unit established at Animal Breeding Farm, Kalsi has capacity to produce 10 MT Compact Fodder



Blocks per shift. The unit has produced 1257.96 M.T. Compact Fodder Blocks (weighing 14 kg. & 12 kg. each) & distributed/ sold 1204.666 M.T. Compact Fodder Blocks to the beneficiaries. The Fodder Bank, Shyampur has produced 64278 Urea Molasses Mineral Blocks (weighing 2.5 kg. each) & distributed/ sold 61694 Urea Molasses Mineral Blocks.

- **Fertility Camps:** Under NPCBB the board has facilitated organization of 990 fertility camps with active participation of Department of Animal Husbandry, Dairy Development Department & NGOs.

Progress till October 2011

S. No.	Particulars	Year 2011-12			April-October 2010	Since Inception	
		Target	Achievement During October 2011	Cumulative Achievement		Target	Achievement
1	Establishment of Artificial Insemination Centers	100	3	16	50	1441	1330
	Deep Frozen Semen Production (No. of Straws)	1650000	148010	1080270	959160	7410000	7952835
2	Deep Frozen Semen Distribution (No. of Straws)	1650000	154007	945772	959798	-	7370577
	Artificial Insemination						
	Cow	315000	8689	129022	121421	1771550	1569116
	Buffalo	110000	4602	43704	41433	559950	564566
	Total	425000	13291	172726	162854	2331500	2133682
	Conception Rate (on Pregnancy Diagnosis)						
	Cow	58%	61.20%	58.91%	59.09%	58%	58.48%
	Buffalo	53%	55.74%	53.56%	55.27%	53%	53.82%
	Total	57%	59.97%	57.26%	57.96%	57%	57.23%
	Calf Born through Artificial Insemination						
	Cow	125000	3527	53026	50688	630835	600813
	Buffalo	45000	1824	20629	19452	192420	194678
	Total	170000	5351	73655	70140	823255	795491



4	Distribution of Bulls for Natural Breeding Centers						
	Cow Bull	20	0	8	12	310	428
	Buffalo Bull	56	0	0	0	1569	1956
	Yak Bull	-	0	0	0	-	2
	Total	76	0	8	12	1879	2386
5	Organization of Training						
	Pashulok Training Center	250	04	249	225	4700	5100
	Kalsi Training Center	500	20	253	201	2600	3285
	Under N.P.C.B.B	307	04	86	209	9419	9897
6	Animal Breeding Farm, Kalsi						
	Herd Strength	300	448	448	407	300	448
	Conception Rate	65%	63%	71%	70%	65%	60%
	Milk Production (Kg.)	180000	13965.5	97033	97993	1410000	1329640.5
	Gau Mutra Ark Sale (Lit.)	39000	1100	5500	11350	-	92800
	Calf Born	75	5	58	71	700	762
	Wet Average (in Kg.)	6.5	5.8	6	6.1	6	6
	Embryo Biotechnology Research & Training Center, Kalsi						
	Donars super ovulated	20	0	9	12	65	80
	Embryo Recovered	100	0	47	78	400	447
	Transferable Embryos	80	0	28	46	285	299
	Embryo Preserved	50	0	10	14	175	147
	Embryo Transferred	30	0	34	42	160	194
Pregnancies Established	12	0	17	8	59	81	
Calves Born	12	4	20	19	54	64	
7	Farmers Orientation & Infertility camps	200	0	0	95	1190	990
8	Field Performance Recording Program/ Progeny Testing Program						
	Number of Animals in Recording/ Completed Recording	500	8	307	304	4500	5184
9	National Seminar	-	-	-	-	-	3
10	Insurance under Livestock Insurance Scheme						
	Udham Singh Nagar	3500	2	428	425	23000	7721
	Haridwar	3500	13	331	1016	23000	2859
	Nainital	3500	4	621	478	14000	5757
	Dehradun	3500	12	535	289	14000	3257
	Pithauragarh	3500	0	218	50	10500	273
	Chamoli	3500	20	272	104	10500	708
	Total	21000	51	2405	2362	95000	20575



Fodder Development Program							
11	11.1 Fodder Mini Kit Distribution	16650	30500	41500	44430	107883	163863
	11.2 Establishment of Fodder Nursery						
A. Under Abhinav Jawahar Rojgar Yojana							
	Number of Van Panchayat (Covered Area in Hectare)	16 (90)	18 (93.1)	18 (93.1)	18 (93.1)	16 (90)	18 (93.1)
	Number of Government/ Dairy Farm (Covered Area in Hectare)	24 (90)	24 (85.94)	24 (85.94)	25 (89.94)	24 (90)	24 (85.94)
	Total	40 (180)	42 (179.04)	42 (179.04)	43 (183.04)	40 (180)	42 (179.04)
B. Under Grassland Development including Grass Reserve							
	Number of Van Panchayat (Covered Area in Hectare)	18 (90)	17 (90)	17 (90)	17 (90)	17 (90)	17 (90)
	Total (Number of Fodder Nurseries and Covered Area in Hectare)	58 (270)	59 (269.04)	59 (269.04)	60 (273.04)	58 (270)	59 (269.04)
11.3 Distribution of Napier Root Stock Cutting (in Qtl.)							
	Shyampur Farm	3000	5	2545.90	2514.55	17000	16441
	Kalsi Farm	1000	00	2080.08	818.3	6000	8472.08
	Other Nurseries	2000	00	1352.00	1420	11000	13522
	Total	6000	5	5977.98	4752.8	34000	38435.08
11.4 Fodder Bank							
	Compact Fodder Block Production (in M.T.)*	1000	15.26	292.93	323.51	3000	1982.25
	Distribution of Compact Fodder Block (in M.T./)	1000	16.22	182.82	320.952	3000	1811.99
	Production of U.M.M.B. (in Number)	25000	2519	12346	15684	72500	76624
	Distribution of U.M.M.B. (in Number)	25000	4172	13246	19752	72500	74950

* Production of compact fodder block started in April 2009.



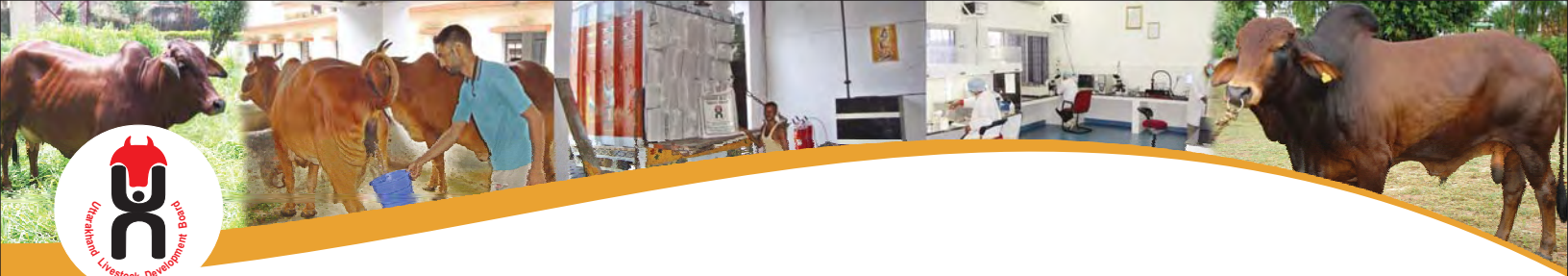
Introduction:

As per 18th livestock census- 2007, the population of cattle is 2235116 (1895689 Indigenous and 339427 Crossbred) and buffalo is 1219518 in the State. The total breedable population of cattle and buffalo is 812882 and 702307 respectively. The total breedable population in the State is 1515189. The majority of cattle in the State are desi (non-descript) type and only 15.19% cattle are crossbred. In the year 2010-11 milk production of the State is 1383.352 thousand M.T.

As per the guidelines circulated by Department of Animal Husbandry, Dairying & Fisheries, Ministry of Agriculture, Government of India the Uttarakhand Livestock Development Board has submitted project proposal for implementation of National Project for Cattle & Buffalo Breeding (NPCBB) Phase I (10th Five Year Plan: Year 2002-03 to 2006-07) & NPCBB Phase II (11th Five Year Plan: Year 2007-08 to 2011-12). For the State of Uttarakhand the Department of Animal Husbandry, Dairying & Fisheries, Ministry of Agriculture, Government of India has approved ₹ 1585.12 lakh for implementation of NPCBB Phase I & ₹ 1051.00 lakh for implementation of NPCBB Phase II.

On direction of Department of Animal Husbandry, Dairying & Fisheries, Ministry of Agriculture, Government of India the Uttarakhand Livestock Development Board has submitted project proposal of ₹ 300.00 lakh for Strengthening of Embryo Biotechnology Research & Training Center, Kalsi as Center of Excellence for Embryo Transfer in Bovine. The Department of Animal Husbandry, Dairying & Fisheries, Ministry of Agriculture, Government of India has approved ₹ 259.27 lakh for the Strengthening of Embryo Biotechnology Research & Training Center, Kalsi and total sanction for implementation of





NPCBB Phase II is revised to ₹ 1310.27 lakh.

The Department of Animal Husbandry, Dairying & Fisheries, Ministry of Agriculture, Government of India has sanctioned and released ₹ 747.01 lakh for implementation of National Project for Cattle & Buffalo Breeding Phase II and the Uttarakhand Livestock Development Board has utilized the released grant in aid for implementation of activities sanctioned under the project.

Under Rashtriya Krishi Vikas Yojana the board has submitted project proposal of ₹ 760.00 lakh for Strengthening, Modernization and Expansion of Animal Breeding Farm, Kalsi. The Government has sanctioned ₹ 467.57 lakh. The board has utilized the released grant in aid by construction of Tube well bore with Percussion Method, Pump House, Main Over Head Tank of 1.50 lakh liter capacity, construction of two Cow Sheds, Bio Gas Plant with 6 KW Generator, Veterinary Dispensary, Cow Urine Processing Lab, Straw Storage Godown, Electrification of Farm campus, Farmers Training Center, Training Bus, Strengthening of Embryo Biotechnology Research & Training Center.

Under Rashtriya Krishi Vikas Yojana the board has submitted project proposal of ₹ 370.50 lakh for Strengthening of Fodder Banks and the Government has sanctioned ₹ 184.26 lakh. The board has utilized the released grant in aid by establishing two large Fodder Storage Godown, one at Fodder Bank, Kalsi and one at Fodder Bank, Rudrapur, Fire Hydrant System, Rain Water Harvesting System, Transportation facility in the form of deployment of Utility vehicle.

Apart from implementing centrally sponsored National Project for Cattle & Buffalo Breeding and projects sanctioned under Rashrtiya Krishi Vikas Yojana the Uttarakhand Livestock Development Board is also implementing following projects:





Project	Sponsoring Agency	Brief about the Project
Fodder Bank Project	Government of Uttarakhand & Government of India	Establishment of 02 "Compact Fodder Block Manufacturing Units" and 47 "Sub Fodder Banks" at block level for ensuring round the year available of nutritious fodder
Abhinav Jawahar Rojgar Yojana	Department of Rural Development, Government of India	Establishment of Center of Excellence of Fodder Grasses in Van Panchayats, Community Lands & Government Farm for the demonstration & dissemination of improved fodder grass varieties to the farmers
Grassland Development including Grass Reserve	Department of Animal Husbandry, Dairying & Fisheries, Government of India	Establishment of Grass Lands including Grass Reserves in Van Panchayats and other common property resources in 09 Hilly districts of the State with the objective of adoption of a scientific approach for the production of high quality fodder, its conservation, optimal utilization and production & dissemination of high quality fodder germplasm and to impart training to farmers on fodder production
Livestock Insurance Scheme	Department of Animal Husbandry, Dairying & Fisheries, Government of India	The scheme is being implemented in Dehradun, Haridwar, Chamoli, Udham Singh Nagar, Nainital & Pithoragarh districts with the objective of safeguarding the farmers from the occasional loss of their valuable milch cows & buffaloes
Integrated Livestock Development Center	Uttarakhand Parvatiya Aajeevika Sanvardhan Company	Establishment of 07 Integrated Livestock Development Centers in district Uttarkashi, 04 Integrated Livestock Development Centers in district Chamoli & 03 Integrated Livestock Development Centers in district Tehri Garhwal
Para-vet Project	District Rural Development Agency, Tehri	06 Para-vets Centers established in Tehri District dovetail with NPCBB
Para-vet Project	District Rural Development Agency, Chamoli	12 Para-vets Centers established in district Chamoli
Mahila Karyabojh Neunikaran Yojana	Mahila Sashaktikaran Evam Bal Vikas Vibhag, Uttarakhand	The scheme is implemented in Pratap Nagar & Kirti Nagar blocks of district Tehri and Gairsain & Pokhari blocks of district Chamoli covering 80 villages.



Activities implemented by ULDB:

Deep Frozen Semen Production Program:

The ISO 9001:2008 & HACCP certified Deep Frozen Semen Production Laboratory of Uttarakhand Livestock Development Board is following stringent quality norms for the production of hygienic and quality frozen semen. The frozen semen produced in the center is fulfilling the demand of State & surplus doses are supplied to other States. The Semen Station has produced 6872565 frozen semen straws and sold 6424805 frozen semen straws. In the year 2010-11 the Semen Station has produced a total of 1615795 frozen semen straws with average per bull production of 36722 frozen semen straws.

Deep Frozen Semen Straw Production:

S. No.	Breed	Total Bulls	Working Bulls	DFS Production	
				Year 2010-11	Since Inception
1	Jersey 100%	6	3	251225	878593
2	Jersey 50%	4	2	44090	402050
3	HF 100%	8	8	475860	1890476
4	HF 50%	13	9	220480	1359251
5	Murrah	19	14	461315	1455700
6	Red Sindhi	5	5	66900	562785
7	Sahiwal	3	3	95925	323710
	Total	58	44	1615795	6872565

Deep Frozen Semen Straw Distribution/ Sale:

S. No.	Breed	Year 2010 11			Since Inception			Closing Balance
		Within State	Other States	Total	Within State	Other States	Total	
1	Jersey 100%	62800	151404	214204	331890	499205	831095	47498
2	Jersey 50%	18900	50919	69819	66720	133083	199803	202247
3	HF 100%	60100	381096	441196	365826	1471827	1837653	52823
4	HF 50%	124800	272831	397631	523060	835967	1359027	224
5	Murrah	164500	303321	467821	598130	848040	1446170	9530
6	Red Sindhi	63600	52240	115840	273960	156128	430088	132697
7	Sahiwal	6880	88682	95562	49760	271209	320969	2741
	Total	501580	1300493	1802073	2209346	4215459	6424805	447760





Apart from semen production the Uttarakhand Livestock Development Board is also providing comprehensive consultancy services to Assam Livestock Development agency for the establishment of Frozen Semen Bull Station at Barapeta, Assam.

Input Distribution Program:

One central semen bank located at Shyampur, Rishikesh and two regional semen banks located at Shyampur, Rishikesh & Lalkuan, Nainital are ensuring uninterrupted door step delivery of breeding inputs to artificial insemination centers of the State through 04 hired vehicles. Both the regional semen banks have static 6000 liters vertical LN2 storage vessel. The liquid nitrogen is sourced from the industrial manufacturers by transport type LN2 tankers (one 3000 liter capacity & one 6000 liter capacity). The board is ensuring door step delivery of liquid nitrogen, semen and other inputs to all Artificial Insemination Centers of the State.

Operational Artificial Insemination Centers during the Year 2010-11:

S. No.	District	Dept. of AH	Private	Dairy Co-operative	BAIF	JK Trust	Total
1	Almora	77	27	1	12	0	117
2	Bageshwar	21	11	0	8	0	40
3	Chamoli	20	44	0	12	0	76
4	Champawat	22	10	0	12	0	44
5	Dehradun	66	46	0	13	30	155
6	Haridwar	38	85	0	11	0	134
7	Nainital	91	69	8	15	0	183
8	Pauri	54	22	0	4	0	80
9	Pithoragarh	40	13	0	0	0	53
10	Rudraprayag	18	24	0	5	0	47
11	Tehri	28	35	0	3	0	66
12	Udham Singh Nagar	96	108	34	10	0	248
13	Uttarkashi	39	25	0	5	0	69
	Total	610	519	43	110	30	1312





Year wise status of Artificial Insemination Centers:

Year 2002-03	Year 2003-04	Year 2004-05	Year 2005-06	Year 2006-07	Year 2007-08	Year 2008-09	Year 2009-10	Year 2010-11
434	469	587	684	878	980	1156	1224	1312

Artificial Insemination Program:

The total number of artificial inseminations carried out in the year 2010-11 is 375178 with an increase of about 279501 numbers of artificial inseminations from the year of inception of activity of board.

Year wise details of Artificial Insemination (A.I.) and Calf Born through A.I.:

S. N.	Year	Target: A.I.	A.I.	Target : Calf Born	Calf Born
1	2002-03	100000	95677	33000	32803
2	2003-04	106500	108518	35500	35864
3	2004-05	128000	132094	42460	42286
4	2005-06	152000	160417	55545	55337
5	2006-07	175000	195663	59500	65656
6	2007-08	225000	233060	87250	82053
7	2008-09	300000	307750	100000	116843
8	2009-10	330000	352599	110000	131285
9	2010-11	390000	375178	130000	159709
	TOTAL	1906500	1960956	653255	721836





Agency-wise Artificial Insemination and Follow up in the year 2010-11:

S. No.	Agency	Artificial Insemination			Follow up				Total	
		Cow	Buffalo	Total	Cow		Buffalo			
					Pregnant	Non-pregnant	Pregnant	Non-pregnant	Pregnant	Non-pregnant
1	Dept. of Animal Husbandry	114072	41941	156013	59516	41159	19715	16033	79231	57192
2	BAIF	38079	17584	55663	19338	12845	9243	6355	28581	19200
3	Dairy Cooperative	6499	2500	8999	3589	2313	1429	1005	5018	3318
4	Private AI Workers	95599	53979	149578	43017	30112	24273	21232	67290	51344
5	JK Trust	2934	1991	4925	1307	863	913	608	2220	1471
	Total	257183	117995	375178	126767	87292	55573	45233	182340	132525

Agency-wise Calf Born through Artificial Insemination in the year 2010-11:

S. No.	Agency	Calf Born Through Artificial Insemination								
		Cow			Buffalo			Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
1	Dept. of Animal Husbandry	28049	25840	53889	9630	8295	17925	37679	34135	71814
2	BAIF	8289	7809	16098	3777	3221	6998	12066	11030	23096
3	Dairy Cooperative	1491	1351	2842	514	539	1053	2005	1890	3895
4	Private AI Workers	20114	17711	37825	11565	9934	21499	31679	27645	59324
5	JK Trust	480	425	905	405	270	675	885	695	1580
	Total	58423	53136	111559	25891	22259	48150	84314	75395	159709

Conception Rate on the basis of Pregnancy Diagnosis:

S. No.	Particulars	Year 2010-11		Year 2009-10	Cumulative Progress
		Target	Achievement		
1	Artificial Insemination (No.)				
1.1	Cow	290000	257183	245101	1440094
1.2	Buffalo	100000	117995	107498	520862
1.3	Total	390000	375178	352599	1960956
2	Conception Rate (%)				
2.1	Cow	58	59.22	60.23	58.44
2.2	Buffalo	53	55.13	55.30	53.85
2.3	Total	57	57.91	58.74	57.23





Natural Breeding Program:

The ULDB has distributed a total of 2378 breeding bulls (420 Cow Bulls; 2 Yak Bulls & 1956 Buffalo Bulls) for natural breeding services in those places of 11 hilly districts where Artificial Insemination services are difficult to reach at present.

The cow bulls are sourced from Animal Breeding Farm, Kalsi; Instructional Dairy Farm, G.B.P.U.A.&T., Pantnagar; Exotic Cattle Breeding Farm, Bhararisain, D.A.R.L. Panda Farm, Pithoragarh & animals registered in field performance recording program of NPCBB and buffalo bulls from Central Herd Registration Scheme, Rohtak.

Out of the total 2378 bulls distributed since inception of NPCBB, a total of 2065 bulls (296 Cow Bulls; 2 Yak Bulls & 1767 Buffalo Bulls) are live & providing natural breeding services. The custodians are realizing the cost for the natural services rendered by their bulls.

Natural Breeding Centers:

S. No.	District	Bull Distribution since Inception			Bull Died since Inception			Working Bulls		
		Cow Bull	Buffalo Bull	Total	Cow Bull	Buffalo Bull	Total	Cow Bull	Buffalo Bull	Total
1	Almora	19	195	214	6	11	17	13	184	197
2	Bageshwar	5	145	150	0	5	5	5	140	145
3	Chamoli	71	301	372	27	18	45	44	283	327
4	Champawat	14	147	161	3	14	17	11	133	144
5	Dehradun	10	103	113	3	10	13	7	93	100
6	Nainital	33	183	216	10	26	36	23	157	180
7	Pauri	71	75	146	19	10	29	52	65	117
8	Pithoragarh*	69	241	310	19	29	48	50	212	262
9	Rudraprayag	57	140	197	15	10	25	42	130	172
10	Tehri	25	304	329	10	40	50	15	264	279
11	Uttarkashi	48	122	170	12	16	28	36	106	142
Total		422	1956	2378	124	189	313	298	1767	2065

* Cow Bull including 02 Yak Bulls





Breedable Population Coverage:

As a result of the continued efforts of the board, dept. of AH & other stakeholders involved in facilitating the implementation of the breeding program in the state, the percentage of organized breedable population covered under the organized breeding setup has reached to 41.69% (23.17% through Artificial Insemination & 18.52% through Natural Breeding) in the year 2010-11.

MIS:

The ULDB has developed software for the monitoring of input distribution and breeding activities. The artificial insemination software developed by ULDB is having facilities for real time online data entry and SMS data entry. The software is hosted at board's website www.uldb.org. ULDB has also developed software for the monitoring of field performance recording, livestock insurance scheme, dairy herd management software. For quality semen production the ULDB is using Software for Managing Integrated Laboratory Environment (SMILE) in its Deep Frozen Semen Production Center, Shyampur, Rishikesh.

Organization of Farmers Orientation & Fertility Camps:

Since inception of NPCBB the ULDB has organized 990 Infertility camps in which a total of 54582 nos. of animals (20606 cases of infertility & 33976 other cases) were treated in the camps & 32402 nos. of farmers (23452 men & 8950 women) were oriented.

Progress of Farmers Orientation & Fertility Camp:

Particulars	No. of Camps	No. of Animal Treated			No. of Farmers Oriented		
		Infertility	Other	Total	Male	Female	Total
Year 2010-11	150	1954	5096	7050	1703	702	2405
Since Inception	990	20606	33976	54582	23452	8950	32402





Field Performance Recording Program:

Milk recording of animals is done with the objective for the production of bulls, for assisting the farmers in making day to day farm management decisions & for genetic improvement of future stock. In the State of Uttarakhand with the objective of identifying elite milch cattle & buffalo the ULDB is implementing Field Performance Recording Program in 05 districts of State of Uttarakhand. Since inception, a total of 4877 animals were selected for milk recording by 81 societies engaged in selection & milk recording. A total of 1425 animals having milk production above standard are registered in herd book. The details of the animals registered in herd book are available in the board's website www.uldb.org.

Number of Milch Cow & Buffaloes taken in Milk Recording Program:

S. No.	District	Murrah	Jersey Crossbred	H.F. Crossbred	Other	Total
1	Udham Singh Nagar	497	386	1455	130	2468
2	Nainital	386	277	697	130	1490
3	Dehradun	120	113	190	93	516
4	Chamoli	0	9	0	0	9
5	Haridwar	334	35	18	7	394
	Total	1337	820	2360	360	4877

Number of Milch Cows & Buffaloes registered in Herd Book:

S. No.	District	Murrah	Jersey Crossbred	H.F. Crossbred	Other	Total
1	Udham Singh Nagar	145	53	550	65	813
2	Nainital	102	20	230	52	404
3	Dehradun	29	36	74	17	156
4	Chamoli	0	0	0	0	0
5	Haridwar	43	4	2	3	52
	Total	319	113	856	137	1425





Training Program:

The training center located at Pashulok Rishikesh strengthened & established under National Project for Cattle & Buffalo Breeding is having modern facilities to impart training to the participants on all aspects of Animal Husbandry & allied topics. The center is organizing sponsored in house training on different subjects as per the requirement of the beneficiaries. Since inception the center has organized training for 4851 participants.

The ULDB Training Center and Embryo Biotechnology Research Center, Kalsi has organized training on frozen semen production and embryo transfer technology to the professional of other States viz. Uttar Pradesh, Maharastra, Bihar, Rajasthan, Sikkim, Andhra Pradesh, Kerala and Himachal Pradesh etc.

Sponsored Training Programs:

S. No.	Training Program	Duration	No. of Participants			
			Year 2010-11		Since Inception	
			Registered	Trained	Registered	Trained
1	Veterinary First Aid	15 Days	-	-	139	139
		07 Days	-	-	495	495
2	Goat Husbandry	03 Days	10	10	54	54
3	Poultry	03 Days	-	-	180	180
4	Dairy Cooperative Society's Secretary Training	22 Days	-	-	45	45
		21 Days	-	-	18	18
		23 Days	-	-	43	40
		25 Days	-	-	77	70
		30 Days	-	-	141	138
5	Fresher Training of DCS's Secretary	07 Days	-	-	69	69
6	Farmers Training	01 Day	-	-	257	257
		03 Days	-	-	300	300
		06 Days	-	-	265	265
7	Animal Husbandry & Fodder Production	07 days			216	207
		06 Days	28	28	28	28
		03 Days	-	-	119	119
		02 Days			34	34
8	Fodder Development	02 Days			26	26
		01 Day	-	-	54	54



9	Fodder Demonstrator Training	07 Days	-	-	4	4
10	Refresher Training of Fodder Demonstrator	02 Days	-	-	4	4
11	Women Drudgery Reduction Training	03 Days	-	-	69	69
12	Fodder Production & Utilization	02 Days	-	-	1	1
13	Private AI Workers Refresher Training	02 Days	-	-	59	59
14	Refresher Training on AI	01 Days	188	188	188	188
		05 Days	13	13	13	13
		06 Days			67	67
		03 Days	-	-	402	402
		18 Days	-	-	38	38
		17 Days	-	-	42	42
		15 Days			183	180
15	Training on AI (UPSA)	120 Days	44	35	620	517
		100 Days	3	3	3	3
		65 Days	3	3	3	3
		45 Days	2	2	2	2
16	Training on Computer & Data Entry	15 Days	-	-	18	18
17	Field Performance Recording	02 Days	-	-	56	56
18	JK Trust Gopal Training	30 Days	-	-	39	21
19	Orientation of students of Vety. College, Pantnagar	01 Day	-	-	55	55
20	Orientation of students of Vety. College, Bikaner	02 Days	-	-	18	18
21	Orientation of ULDB Officers	03 Days	-	-	11	11
22	Basic Training on AI	45 Days	-	-	193	190
		30 Days	99	98	99	98
23	Trainers Training	06 Days	-	-	19	19
24	Assistance in AI in Cow & Buffalo	06 Days	-	-	49	49
25	Animal Breeding & AI Technique	03 Days	-	-	53	53



26	Piggery	03 days	16	16	30	30
27	Frozen Semen Technology	15 Days	-	-	4	4
28	Breeding & Management	07 Days	-	-	9	9
29	Buffalo Rearing	03 Days	-	-	20	20
30	Health Management & Breed Improvement	15 Days	-	-	11	11
31	Bull Rearing	03 Days	7	7	22	18
32	Training on Bio-security & HACCP	01 day	40	40	40	40
	Total	-	420	416	5005	4851

Besides providing in-house training at ULDB Training Center the ULDB is also organizing training program under National Project for Cattle & Buffalo Breeding (NPCBB). Veterinary Officers / Livestock Extension Officers/ Pharmacists/ Farmers are trained on Artificial Insemination, Embryo Transfer Technology, Frozen Semen Production, Quality Control, Dairy Herd Management etc. at renowned institutions/ organizations of the Country. The training programs were organized at Sabarmati Ashram Gaushala, Bidaj; Northern Regional Demonstration & Training Center, Jalandhar, Central Frozen Semen Production & Training Institute, Hessarghatta; Indo Swiss Farm, Kerala Livestock Development Board, Mattupatty; Govind Ballabh Pant University of Agriculture & Technology, Pantnagar. Uttarakhand Livestock Development Board is also deputed its officers for professional trainings / visits at different institutes of India as a part of continual improvement of knowledge. Since inception the ULDB has organized training program for 9811 participants under NPCBB.





Training organized under NPCBB:

S. No.	Training Program	Designation of Trainees	Place o Training	Training Days	Participants	
					Year 10-11	Since Inception
1	Livestock Owner/ Farmers Training	Progressive Farmers	GBPUAT, Pantnagar	3 Days	0	1162
		Farmers	District HQ	1 Day	0	4808
		Farmers	ULDB TC Pashulok; Kalsi	1 Day	0	225
2	Orientation Training on A.I.	Private A.I. Workers	ULDB TC Pashulok; Kalsi	3 Days	0	279
		DAH Employe	ULDB TC, Pashulok	6 Days	0	79
		L.E.O./ Vety. Pharmacist	District HQ; Dehradun	1 Day	0	524
		Vety. Officers		1 Day	0	349
3	Refresher Training on A.I.	L.E.O./ Vety. Pharmacist/ Private A.I. Workers	NRDTC, Jalandhar; GBPUAT, Pantnagar; ULDB Training Center, Pashulok	1 Week	203	1190
4	A.I. Training	Private A.I. Workers	ULB TC, Pashulok	4 Month	43	525
5	Fertility Management	Vety. Officers	NRDTC, Jalandhar; GBPUAT, Pantnagar; ULDB TC, Pasulok	5-8 Days	0	481
6	Embryo Transfer Technology	Vety. Officers	SAG, Bidaj	3 Weeks	3	12
7	DFS Production Technology	Vety. Officers	SAG, Bidaj; NRDTC, Jalandhar;; KLDB; NIANP, Banglore	15-21 Days	0	56
8	Trainers Training	Vety. Officers / Observer	NDDB, CRS, Rohtak; ULDB TC, Pashulok	3-6 Days	0	92
9	Computer Training	Officials / Personal of ULDB; Dept. of AH	NIIT, Dehradub; ULDB TC, Pasulok; SAG, Bidaj	1 Week	5	29
		Total			254	9811



Livestock Insurance Scheme:

The Uttarakhand Livestock Development Board is implementing National Livestock Insurance Scheme in Dehradun, Haridwar, Chamoli, Nainital, Udham Singh Nagar & Pithoragarh districts of state of Uttarakhand. Since inception a total of 18170 milch cow & buffaloes are insured in this scheme. A total of 2043 claims were made for the death of animals, out of this a total of 1814 claims are settled and ₹ 272.09 lakhs is disbursed to the beneficiary households. The premium claim ratio of the scheme is 1:1.613 (including the contribution towards cost of premium by the livestock owners).

Insurance Companies engaged & Premium Rates:

Year	Insurance Co.	Premium Rate (% of Sum Insured)	
		For 01 Year Coverage	For 03 Year Coverage
2006-07	The Oriental Insurance Co. Ltd., Dehradun	4	7
2007-08	United India Insurance Co. Ltd., Dehradun	1.7	3.8
2008 - 09	National Insurance Company Limited, Dehradun	2.59	5.82
2009-10	TATA AIG General Insurance Co. Ltd., Dehradun	3.08	8.71
2010-11	TATA AIG General Insurance Co. Ltd., Dehradun	3.08	8.71

District wise status of insurance & claim settlement:

S. No.	District	Year 20 10-11			Since Inception of LIS			Claim Settlement		
		Cow	Buffalo	Total	Cow	Buffalo	Total	Total Claim	Settled Claim	Amount Paid (₹ In Lakh)
1	Udham Singh Nagar	650	238	888	3964	3329	7293	1165	1110	151.56
2	Haridwar	672	619	1291	1059	1469	2528	241	178	23.21
3	Nainital	573	372	945	2816	2320	5136	313	262	46.79
4	Dehradun	528	126	654	2026	696	2722	308	262	50.38
5	Pithoragarh	40	10	50	43	12	55	3	0	0
6	Chamoli	257	179	436	257	179	436	13	2	0.15
Total		2720	1544	4264	10165	8005	18170	2043	1814	272.09



Animal Breeding Farm, Kalsi:

Animal Breeding Farm, Kalsi is located at Dehradun- Chakrata high way. The farm is around 52 km. away from Dehradun & at the height of 1807 feet from the sea level. The farm is located at the meeting point of Reserve Forest Boundary Kalsi compartment no. 13-14. It comes under tribal area. Average annual rain fall of the area is 130-150 cm. & like northern India this area also have extreme chill during winter & extreme hot during summer months. Minimum temperature during winter reaches to 0°C & maximum temperature during summer reaches to 38°-40° C. From three sides the farm is surrounded by the rivers that are Amlava towards East, Tons towards West & Yamuna towards South. The farm is having 70.30 hectare land.

Government of Uttarakhand has transferred the farm to ULDB in the year 2005-06 for management aiming to conservation & propagation of endangered Red Sindhi breed of cattle. The farm is strengthened by the construction of cow sheds, calf sheds, milk parlor, open sheds, internal roads, fodder storage godown, training center, veterinary clinic, tube well with overhead tank etc. under National Project for Cattle & Buffalo Breeding and Rashtriya Krishi Vikas Yojana.

The farm has 154 pure Red Sindhi cattle inclusive of adult cows, heifers, female calves, male calves and bulls. The rest of the herd comprising of 259 cattle are Jersindh inclusive of adult cows, heifers, female calves, male calves and bulls (Different blood % e.g. 62.5 %, 75%, 87.5% & 93.75% of Red Sindhi). Back crossing is done in the farm with the objective to maintain pure Red Sindhi Herd. The farm is using Red Sindhi semen brought from Sabarmati Ashram Gaushala for breeding of cows.

With the wet average of 6.07 kg., during the year 2010-11 the farm has produced 159118 kg milk. The farm has distributed 243 no. male calves for natural breeding program of the State & semen production program of State & Country.

The farm has produced & sold 77309 liter of cow urine distillate to Divya Yog Pharmacy, Patanjali Yog Peeth, Haridwar. Selling of Go-mutra Ark has provided additional revenue of ₹1932725.00 to the farm.





The farm has organized practical training in artificial insemination technology, animal management, clean milk production, fodder production etc to 3132 nos. of participants including Veterinary Officers, LEOs, Veterinary Pharmacists, farmers, private AI workers etc..

Center of Excellence of Fodder Grasses developed in the farm has produced & distributed 6362 qtl. fodder root cuttings to different agencies & interested farmers. As a measure towards making the farm self reliant the farm is also manufacturing organic manure & vermi compost. The farm has produced 274.35 MT organic manure & vermi compost. Installation of biogas plant of 60 c.m. capacity with 6 KW generator is generating electricity for running of chaff cutter and go mutra ark production unit of the farm. Solar Water Heating System is installed in milk shed of the farm.

Azolla demonstration Unit is a new initiative taken by the Farm seeing it's high protein content (20-30% on dry weight basis) as feed for livestock.

The progress of Animal Breeding Farm:

S. No.	Particulars	Year 2010-11	Since Inception (Year 2003)
1	Herd Strength	413	413
2	Conception Rate	72.0%	60%
3	Dry & Milk Cow Ratio	44:56	40:60
4	Milk Production (in Kg.)	159118.00	1232607.50
6	Calf Born	99	717
7	Artificial Inception	122	838
8	Distribution/ Sale of Bull/ Male Calves	28	243
9	Distribution/ Sale/ Auction of Heifer/ Cow	21	169
10	Average Calving Interval (in Days)	516	460
11	Average Age at First Calving (in Months)		
	Jersey x Red Sindhi	43	46
	Red Sindhi	41	44
12	Wet Average (in Kg.)	6.1	6.0
13	Mortality	2 70%	5.00%
14	Training Program	573	3132
15	Center of Excellence of Fodder (in Hect.)	8.1	19.9
17	Napier Root Stock Distriution/ Sale (in Qtl.)	818.25	6362
18	Organic Manure Production (in MT)	23	239
19	Vermi Compost Production (in MT)	16.19	35.35
20	Gau Mutra Ark (in Lit.)	18000	77309



Embryo Biotechnology Research & Training Center:

With the objective of conservation, faster multiplication & propagation of Red Sindhi breed of Cattle through use of embryo transfer technology under NPCBB the board has established Embryo Biotechnology Research & Training Center at Animal Breeding Farm, Kalsi in the year 2007-08.

The elite Red Sindhi cows are selected for faster multiplication through use of embryo transfer technology. The center has preserved 137 Red Sindhi embryos and transferred 134 Red Sindhi embryos resulting in birth of 46 pure Red Sindhi calves.

The progress of Embryo Biotechnology Research and Training Center:

S. No.	Particulars	Nos.
1	Donor Super ovulated	72
2	Donor Flushed	66
3	Embryo Recovered	400
4	Transferable Embryo	271
5	Embryo Preserved	137
6	Fresh Embryo Transferred	134
7	Frozen Embryo Transfer	26
8	Total Embryo Transfer	160
9	Pregnancy established: Fresh Embryo	53
10	Pregnancy established: Frozen Embryo	11
11	Total Pregnancy established	64
12	Calves born: Fresh Embryo	46





Under bull production program the center has imported 47 embryos {(25 HF embryos having donors average more than 13800 kg per lactation with more than 4.5% Fat and Sires Daughters average more than 11600 kg per lactation with more than 425 kg Fat) and 22 Jersey embryos having donors average more than 8400 kg per lactation with more than 5.17% Fat and Sires Daughters average more than 7200 kg per lactation with more than 5% Fat)} from Canada. Till October 2011 the center has transferred 31 imported H.F. & Jersey embryos with the result of 21 pregnancies and birth of 07 HF calves & 04 Jersey calves from imported embryos. Since inception of the Center till October 2011 a total of 53 elite Red Sindhi calves are born through transfer of fresh embryos.

The Department of Animal Husbandry, Dairying & Fisheries, Government of India has nominated ULDB for the procurement of imported frozen semen and embryos for the other States participating in National Project for Cattle & Buffalo Breeding.

Embryo Biotechnology Research & Training Center has organized training program on MOET (Multiple Ovulation and Embryo Transfer) for professionals of the State and other States viz. Andhra Pradesh, Kerala, Himachal Pradesh & Rajasthan.

Fodder Development Program:

The ULDB is implementing fodder development projects with the objective of popularizing the cultivation of improved fodder grass & fodder tree varieties suitable for the different agro-climatic zones of the State. The fodder development projects implemented by ULDB are detailed as below:

A. Center of Excellence of Fodder Grasses:

Under Abhinav Jawahar Rojgar Yojna of Government of India, Center of Excellence on Fodder Grasses are established in hilly districts of the State. These centers are also used for demonstration & training of farmers. These centers are established in 18 Van Panchayats covering 93.1 hectare land and 25 farms of the Animal Husbandry Department / campuses of District Milk Unions covering 89.94 hectare land.





Development of Fodder Grass Nursery in Van Panchayats:

S. No.	Name of Van Panchayat	Area (in Hectare)
1	Dol Pokhra, Almora	8
2	Aanwaligad, Khakar, Bageshwar	4
3	Simli, Karanprayag, Chamol	2.5
4	Chiyurkhark, Lалуwapani, Champawat	10
5	Sainj, Chakrata, Dehradun	5
6	Dhanpo, Kalsi, Dehradun	2
7	Kaul, Dhari, Nainital	10
8	Hartola, Ramgarh, Nainital	5
9	Pasauli, Nainital	5
10	Banana, Bhimtal, Nainital	5
11	Faldakot, Yamkeshwar, Pauri	5
12	Serikundar, Bin, Pithoragarh	5
13	Dandadhar, Pithoragarh	10
14	Dharapani, Bin, Pithoragarh	4
15	Bainoli, Ukhimath, Rudraprayag	2.5
16	Singhata, Augustmuni, Rudraprayag	2.5
17	Tipli, Narendranagar, Tehri	2.6
18	Margaon, Chinyalisaur, Uttarkashi	5
	Total	93.1

Development of Fodder Grass Nursery in Government Farms and Dairy Campus:

S. No.	Name of Selected Farm	Area (in Hectare)
1	Fodder Research Center, Bhainswada, Almora	9
2	Aanchal Dairy Plant, Almora	1
3	Poultry Farm, Hawalbag, Almora	0.5
4	Veterinary Hospital, Lamgada, Almora	0.1
5	Veterinary Hospital, Garud, Bageshwar	0.38
6	Aanchal Dairy Plant, Simali, Chamoli	2
7	Exotic Cattle Breeding Farm, Bhararisain, Chamoli	5
8	Angora Farm, Gwaldam, Chamoli	1
9	Sheep Farm, Bangali, Ghat, Chamoli	5
10	Cattle Farm, Nariyal Gaon, Champawat	3
11	Animal Breeding Farm, Kalsi, Dehradun	20
12	DFSPC, Shyampur, Rishikesh, Dehradun	25



13	Veterinary Hospital, Vikasnagar, Dehrdaun	0.5
14	Uttarakhand Pashu Chikitsa Parishad, Dehradun	0.5
15	Aanchal Dairy Plant, Dehradun	1
16	Veterinary Hospital, Raipur, Dehrdaun	0.5
17	Semen Bank, Lalkuan, Nainital	0.2
18	Aanchal Dairy Palnt, Srinagar, Pauri	2
19	Sheep Farm, Kopaddhar, Tehri	1
20	Koteshwar Dam, Tehri	4.0
21	Aanchal Cattle Feed Factory, Rudrapur, Udham Singh Nagar	3
22	Sheep Farm, Dunda, Uttarkashi	0.5
23	Sheep Farm, Thalkundi, Uttarkashi	2.16
24	LEO Center, Phold, Dunda, Uttarkashi	2
25	Community Center, Rajgarhi, Uttarkashi	0.6
	Total	89.94

B. Grassland Development including Grass Reserve:

Under Grassland Development & Grass Reserve Project the ULDB has developed 90 hectare land of 17 Van Panchayats, Common Property Resources & Community Lands of 09 hilly districts.

S. No.	Van Panchayat	Area (in Hectare)
1	Badgal Bhatt, Hawalbagh, Almora	5
2	Guna Chautara, Lamgada, Hawalbagh, Almora	5
3	Gheti, Garud, Bageshwar	5
4	Bhatkhola, Bageshwar	5
5	Bhararisain, Gairsain, Chamol	10
6	Punawe, Champawat	5
7	Mudiyani, Champawat	5
8	Desau, Kalsi, Dehradun	5
9	Jadana, Kalsi, Dehradun	5
10	Pasauli, Bhimtal, Nainital	5
11	Pande Gaon, Bhimtal, Nainital	5
12	Madkhadayat, Bin, Pithoragarh	5
13	Maddhura, Bin, Pithoragarh	5
14	Giriya, Mansuna, Rudraprayag	5
15	Makku, Ukhimath, Rudraprayag	5
16	Lata, Bhatwadi, Uttarkashi	5
17	Ghandala, Naugaon, Uttarkashi	5
	Total	90



In the year 2010-11 the Department of Animal Husbandry, Dairying & Fisheries, Government of India has sanctioned and released ₹ 230.00 lakhs for the establishment of Grassland Development including Grass Reserve in 46 Van Panchayats covering 5 hectare land in each Van Panchayat. The establishment of Grassland Development including Grass Reserve in 46 Van Panchayats is in progress.

C. Fodder Bank, Shyampur, Rishikesh:

The ULDB has established Fodder Bank at Shyampur, Rishikesh in the year 2005. The fodder bank is producing & distributing urea molasses mineral bricks (UMMB), root stocks, seeds of improved fodder varieties. Since inception the fodder bank has distributed/ sold 14259.45 qtl. root stock and 1057.79 qtl. fodder seeds to different agencies for propagation of improved varieties of fodder crops and fodder grasses. The Fodder Bank, Shyampur has distributed 82618 nos. of compact fodder blocks (weighing 5 kg. each) & 61694 nos. urea molasses mineral bricks (weighing 2.5 kg. each) to the farmers & different agencies.

Progress of Fodder Bank, Shyampur:

S. No.	Particulars	Details	Distribution/ Sale	
			During the Year	Since Inception
1	Compact Fodder Block	5.00 Kg. Each	0	82618
2	Urea Molasses Mineral Blocks (UMMB)	2.5 Kg. Each	25957	61694
3	Root Stock (in Qtl.)	Hybrid Napier	2514.55	13893.10
		Guniya Grass	11	241
		Sita Grass	11	123.85
		Hedge	-	1.50
		Lucerne		
		Total	2536.55	14259.45
4	Fodder Seeds (in Kg.)	Guniya Grass	23	169
		Rye Grass	-	272
		Leucerne	22.80	44.80
		Oat	22100	102740
		Sita Grass	3	34
		Barley	-	2520
		Total	22148.80	105779.80



D. Feeder Fodder Bank, Kalsi:

The ULDB has established two Compact Fodder Block Manufacturing Units, one at Animal Breeding Farm, Kalsi, Dehradun & one at Aanchal Animal Feed Factory, Rudrapur, Udham Singh Nagar. Each unit is having capacity to produce 10 MT Compact Fodder Blocks per day per shift. The Kalsi unit has started production of compact feed blocks from April 2009. The Compact Fodder Blocks manufactured are weighing 14 kg. (Dudharu Bheli) & 12 Kg. (Rahat Bheli). Since inception the Fodder Bank, Kalsi and Rudrapur has produced 2807.89 MT compact feed blocks and distributed 2722.748 MT compact Fodder blocks.

The ULDB has also established 47 Sub Fodder Banks at block level for ensuring timely availability of Compact Feed Blocks. Sub Fodder Bank is having capacity for the storage of 50 MT Compact Feed Blocks.

Progress of Fodder Bank, Kalsi:

Particulars	Production (in M.T.)		Distribution (in M.T.)	
	Year 2010 11	Since Inception	Year 2010 11	Since Inception
Dudharu Fodder Block (14 Kg. each)	162.666	759.948	146.272	743.554
Rahat Fodder Block (12 Kg. each)	459.888	498.012	422.988	461.112
Total	622.554	1257.96	569.26	1204.666

Progress of Fodder Bank, Aanchal Cattle Feed Factory, Rudrapur:

Particulars	Production (in M.T.)		Distribution (in M.T.)	
	Year 2010 -11	Since Inception	Year 2010 -11	Since Inception
Dudharu Fodder Block (14 Kg. each)	3.08	326.938	3.08	326.938
Rahat Fodder Block (12 Kg. each)	206.616	1222.992	182.208	1191.144
Total	209.696	1549.93	185.288	1518.082





Sub Fodder Banks are established in following places:

S. No.	District	Block	Place of sub Feeder Godown	Department
1	Almora	Tadikheth	Veterinary Hospital, Ranikheth	Animal Husbandry
2	Almora	Takula	Veterinary Hospital, Someshwar	Animal Husbandry
3	Almora	Syalde	Veterinary Hospital, Deghat	Animal Husbandry
4	Almora	Dwarahat	Veterinary Hospital, Dwarahat	Dairy Development
5	Almora	Lamgada	Veterinary Hospital, Lamgada	Dairy Development
6	Almora	Dhauladevi	Veterinary Hospital, Dhauladevi	Dairy Development
7	Almora	Bhikyasain	Veterinary Hospital, Bhikyasain	Dairy Development
8	Almora	Bhesiachina	Veterinary Hospital, Dholchina	Dairy Development
9	Almora	Hawalbag	Milk Union Campus, Almora	Dairy Development
10	Almora	Chaukhutiya	Milk Chilling Center, Chaukhutiya	Dairy Development
11	Almora	Salt	Milk Chilling Center, Marchula	Dairy Development
12	Bageshwar	Kapkot	Veterinary Hospital, Kapkot	Animal Husbandry
13	Bageshwar	Garud	Veterinary Hospital, Garud	Animal Husbandry
14	Bageshwar	Bageshwar	Milk Chilling Center, Kamedi	Dairy Development
15	Chamoli	Chamoli	Veterinary Hospital, Chamoli (under construction)	Animal Husbandry
16	Chamoli	Dewal	Veterinary Hospital, Dewal	Animal Husbandry
17	Chamoli	Gairsain	Veterinary Hospital, Gairsain	Animal Husbandry
18	Chamoli	Narayanbagar	Veterinary Hospital, Narayanbagar	Animal Husbandry
19	Chamoli	Karnprayag	Milk Union Campus, Simli	Dairy Development
20	Chamoli	Dasholi	Veterinary Hospital, Nandprayag	Animal Husbandry
21	Champawat	Pati	Veterinary Hospital, Pati	Animal Husbandry
22	Champawat	Barakot	Veterinary Hospital, Barakot	Animal Husbandry
23	Champawat	Champawat	Milk Union Campus Champawat	Dairy Development
24	Champawat	Lohaghat	Veterinary Hospital, Lohaghat	Animal Husbandry
25	Dehradun	Vikasnagar	Milk Chilling Center, Herbertpur	Dairy Development
26	Nainital	Betalghat	Milk Chilling Center, Betalghat	Dairy Development





27	Nainital	Haldwani	Milk Union, Lalkuan	Dairy Development
28	Nainital	Bhimtal	Milk Chilling Center, Hediyaogaon	Dairy Development
29	Nainital	Ukhalkanda	Milk Chilling Center, Khansyu	Dairy Development
30	Pauri	Srinagar	Milk Union Campus, Srinagar	Dairy Development
31	Pauri	Kotdwar	Milk Chilling Center, Sitabpur	Dairy Development
32	Pithoragarh	Dharchula	Veterinary Hospital, Dharchula	Animal Husbandry
33	Pithoragarh	Gangolihat	Veterinary Hospital, Gangolihat	Animal Husbandry
34	Pithoragarh	Pithoragarh	Milk Chilling Center, Bin	Dairy Development
35	Pithoragarh	Didihat	Milk Chilling Center, Thal	Dairy Development
36	Rudraprayag	Augustmuni	Veterinary Hospital, Augustmuni	Animal Husbandry
37	Tehri	Kirtinagar	Veterinary Hospital, Kirtinagar	Animal Husbandry
38	Tehri	Thauldhar	Veterinary Hospital, Ch ham (Thauldar)	Animal Husbandry
39	Tehri	Chamba	Veterinary Dispensary, Peepaldali	Animal Husbandry
40	Tehri	Chamba	Milk Union Campus, New Tehri	Dairy Development
41	Tehri	Jakhanidhar	Milk Union Campus, Gadoliya	Dairy Development
42	Uttarkashi	Bhatwari	Veterinary Hospital, Bhatwari	Animal Husbandry
43	Uttarkashi	Chinyalisaur	Veterinary Hospital, Chinyalisaur	Animal Husbandry
44	Uttarkashi	Mori	Veterinary Hospital, Naitwar	Animal Husbandry
45	Uttarkashi	Purola	Bull Center, Paura	Animal Husbandry
46	Uttarkashi	Naugaon	Veterinary Hospital, Naugaon	Animal Husbandry
47	Uttarkashi	Dunda	Milk Union Campus, Matli	Dairy Development





Acknowledgement

Uttarakhand Livestock Development Board acknowledges all the departments and agencies whose active and timely facilitation has made the implementation of National Project for Cattle & Buffalo Breeding (NPCBB) and other programs a success. We acknowledge all the departments & agencies for their support especially:

- Department of Animal Husbandry, Dairying & Fisheries, Ministry of Agriculture, Government of India, Krishi Bhawan, New Delhi
- Rashtriya Krishi Vikas Yojana, Government of India
- Central Herd Registration Scheme, Department of Animal Husbandry, Dairying & Fisheries, Government of India, Rohtak
- Central Frozen Semen Production & Training Institute, Hessarghatta
- National Dairy Development Board, Anand, Gujarat
- Sabarmati Ashram Gaushala, Bidaj, Kheda, Gujarat
- Indian Veterinary Research Institute, Izzatnagar, U.P.
- BAIF Rural Development Foundation, Urulikanchan, Pune
- All Military Dairy Farms
- Govind Ballabh Pant University of Agriculture & Technology, Pantnagar, Udham Singh Nagar
- Department of Animal Husbandry, Government of Uttarakhand
- Dairy Development Department, Government of Uttarakhand
- Uttarakhand Cooperative Dairy Federation Ltd., Haldwani, Nainital
- Department of Agriculture, Government of Uttarakhand
- District Rural Development Agency, Government of Uttarakhand
- Uttarakhand Parvatiya Ajeevika Sanvardhan Company, Dehradun
- GRAMYA, Uttarakhand
- HIMMOTTHAN, Uttarakhand
- District Rural Development Agency, Tehri
- District Rural Development Agency, Chamoli
- Mahila Sashaktikaran Evam Bal Vikas Vibhag, Uttarakhand
- J K Trust, Uttarakhand
- National Informatic Center, Government of Uttarakhand
- Regional Office of NABARD, Dehradun.
- State Bank of India, Dehradun
- Punjab National Bank, Dehradun
- The Oriental Insurance Company Ltd., Regional Offices, Haldwani & Dehradun
- The United India Insurance Company Ltd., Dehradun, Haridwar, Kashipur, Khatima, Rudrapur
- New India Assurance Co., Dehradun
- National Insurance Co. Ltd., Dehradun
- TATA AIG General Insurance Company Ltd., Mumbai & Dehradun
- All Artificial Insemination Workers, Customer Agencies procuring inputs from ULDB.


(Kamal Singh)

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