

**Integrated Angora Wool Development Project for
Border/Wool Districts of Uttarakhand**



by

**Himalayan Institute For Environment,
Ecology & Development- Hifeed
Ranichauri, District- Tehri Garhwal, Uttarakhand**

Cost of the Project for Three Years: Rs. 14.21 Crores

BACKGROUND OF THE PROJECT

Angora rabbit breeding and rearing has emerged as an important income generating enterprise in the hilly regions of India in the last 20 years. This livestock system has been viewed to provide a sustainable source of income under small or zero agriculture land holding. The agro- climatic conditions of the hilly regions between 5000 to 7000 feet above sea level in Uttarakhand are viewed as the potential areas for such an enterprise.

Rabbit rearing was firstly initiated in India by a private venture in Kullu in 1960s. In order to carry out research and to popularize and introduce this livestock system as one of the income generating enterprise in late 1970s, angora and broiler rabbits were imported from U.K. and USSR at North Temperate Regional Station of Central Sheep and Wool Research Institute, Indian Council of Agriculture Research, Garsa, Kullu, H.P. Since then this promising livestock species has been tested under various agro-climatic and livestock management systems and with efforts of various Non- Government Organizations, Government Institutes/Departments, Agriculture Universities, Research Institutes and Private Entrepreneurs has been propagated not only in the hills but also in the plains of Punjab and Haryana. The rural setup of India with the main occupation as agriculture has adopted cattle, sheep, goat, piggery and poultry as supportive livestock systems over the years. The decreasing landholdings with increasing family size does not permit the rural setup to undertake sheep/goat rearing on a large scale, as prevalent earlier, but can easily support rabbit rearing as a backyard on large scale venture due to its meager land requirements. In addition to this, rabbit rearing can be one of the suitable ventures for the rural unemployed youth and the household women due to the multifarious activities associated with the rearing of this livestock.

As compared to other livestock, rabbit has the following qualities:

- i.** Rabbit requires around 30% less digestible energy to produce one Kg. of wool as compared to sheep.
- ii.** With the high rate of reproduction, a single female can produce 25-30 young ones in a year.
- iii.** Rabbit wool is 6-8 times warmer than its contemporary sheep wool.
- iv.** Rabbit wool has been found to have medicinal properties and its garments are recommended in cases of arthritis due to electrostatic properties.
- v.** Broiler rabbit skin/pelts can be used for making garments like caps, gloves, jackets and show items like purses, mats and decorative and display material.
- vi.** Rabbit meat is categorized as white meat rich in polyunsaturated fatty acids and low in cholesterol.

- vii.** Rabbit manure is rich in nitrogen and has a good potential in the agriculture.
- viii.** Rabbit faeces can also be used for growing earthworms, which can be used for other supportive ventures like fish and poultry rearing.
- ix.** Rabbits in a backyard rabbitary (up to 50 nos.) can be reared on kitchen waste.
- x.** If reared in an organized way, a household without any external manual assistance can easily manage 100 rabbits.
- xi.** Rabbit faeces can be dried and recycled up to 10% in the ration of rabbits without affecting production.
- xii.** A stock of 100 adult rabbits generates an income of Rs. 2000-3000 per month depending on the quality of germplasm and management system in which they are reared.
- xiii.** Rabbits have short generation interval and the doe can be bred even on the day of kindling to achieve fast multiplication.
- xiv.** Rabbit hair can be blended with silk, polyester, rayon, nylon, wool, etc. to make good quality handlooms as well as hand knitted apparels.

The research and development over the years has resulted in understanding and opening up of large organized as well as small/backyard rabbitaries. The angora rearing and its diversification in the rural sector at present have the following number in various states/locations of India.

• Himachal Pradesh	:	40,000 - 50,000
• Uttarakhand	:	5,000 - 10,000
• Darjeeling	:	1,000 - 2,000
• Sikkim	:	500 - 1,000

These numbers mostly comprise of the German breed of angora and its crosses with an average annual wool production varying between 600-700 gms. per animal.

The concentrated efforts in terms of training programmes, field demonstrations and launching of schemes by various Non Government Organizations, Central Government Departments/Institutions, Central Wool Development Board, State Departments/Institutions, Agriculture Universities, Research Institutes, etc. have motivated the rural youths, women, self-help groups (SHGs). The unemployed youths and the farmers with meager land holdings are adopting rabbit rearing on small and large scales as one of the source of income in the hilly regions of India.

Himachal Pradesh alone has 300-400 small and large rabbit breeders with majority of organized farming located in district Kullu and Palampur. In Uttarakhand, there are around 500 small rabbit units, whereas, in Darjeeling, backyard rabbit rearing has been initiated in around 200 rural households. In Sikkim, though steps were initiated to test this livestock under the agro climatic conditions 2-3 years ago, but only a single private unit has emerged so far.

China is the largest producer of angora wool and contributes 90% of the total raw wool available in International market. Rabbits in China are reared in backyard rabbitaries effectively utilizing the kitchen waste for feeding and local material (bamboo) for construction of housing system. This combined with efficient marketing facilities ensuring quick returns to the producer has given China an edge over the countries. The average wool production per animal though is around than 400 gms. per year in China. Germany, though has the best known germplasm (1200 to 1500 gms. per animal per year) so far, does not compete for raw wool production in the International market. The farms generate high quality breeding stocks on scientific lines, which are exported to other countries.

TASKS BEHIND THE PROJECT

In India, angora rabbit wool is produced in hilly areas of Himachal Pradesh, Uttarakhand, Darjeeling, Sikkim and other areas where the climatic conditions were found suitable. The total population in the country is around 60,000 and approximately 50,000.00 Kg. angora wool is produced annually.

The angora wool can be used by mixing with other fiber like lambs wool, nylon fiber, silk, etc. in knitwear, shawls and woolen suiting. At present, very few mills in Ludhiana and Kullu region are processing this fiber on woolen systems to produce weaving and knitting yarn. The angora wool production in the country not of uniform quality making it difficult to develop a suitable processing system. Consequently, we are importing yarn of angora wool for knitwear sector. Apart from it, we are also importing angora wool and wool sliver, which is blended with lambs wool and silk in the country due to absence of significant angora wool processing technology in India.

Keeping in the view, the importance of angora wool fiber and the potentiality of income and employment generation, there is need to increase production and productivity of the angora wool by making angora rabbit breeding and rearing a popular occupation. High profitability, vast potential of income and employment and income generation, huge potential for earning foreign exchange and role of angora rabbit husbandry in ecological rehabilitation are few of the many positive factors, which call for coordinated efforts, so that the farmers take up angora rabbit breeding and rearing in a big way, particularly the women and educated unemployed youths. The people of the village have understood the favorable economics and livelihood potential of angora rabbit farming. The women and educated unemployed youths can take up this profession and traditional farmers can supplement their income through this profession.

CONSTRAINTS OF THE PROJECT

In spite of the efforts being made by various development agencies to popularize angora rabbit rearing there is a dearth of high yielding germplasm, quality feed and other inputs as well as adequate processing and marketing facilities, to effectively dispose off the produce to ensure the breeder timely returns. An urgent need is felt to provide a concrete base to this promising income generating enterprise keeping in view the following constraints:

i. Non Availability of High Yielding Germplasm

The average annual wool production in the country varies between 600 to 700 grams per animal. This is due to non availability of high wool yielding germplasm of angora rabbits (1200 to 1500 grams) for upgradation of the existing farmer's flocks. The available imported germplasm so far, has not been able to meet out the requirements in terms of quality and quantity of potential angora rabbit rearing areas.

ii. Lack of Adequate Technical Know-How

The farmers are unable to solve day-to-day problems associated with management, health care, shearing, marketing, etc., particularly, as a beginner during the multiplying stage. This results in slow multiplication rate, low wool production, cases of infertility, mortality and poor quality production of wool and high level of inbreeding.

iii. Cost of Inputs

Since angora is a costly fiber, each rabbit has to be housed in rust proof single cage preferably under shed system to avoid any loss due to improper management. This requires higher investment on quality germplasm, cages, housing system and other daily routine management practices to establish and run a farm and to get good returns. The high cost of inputs also discourages the rearers to provide the required inputs leading to slow progress, poor reproductive efficiency in the flock, high mortality rate, low wool production and uncertain/poor returns.

iv. Problem of Inbreeding

Rabbits have a fast multiplication rate with gestation period of 30 to 32 days. Effective planning is required to control inbreeding. Inbreeding affects reproductive performance, cause poor growth, low wool production, etc. Since, most of private farms do not follow requisite record management, this has resulted in high level inbreeding in the rabbitaries, as the farmers share breeding males without any ancestral verification. The provision of breeding units under various schemes with verification of ancestral records, no ear tagging of animals, unplanned breeding strategy and lack record management has aggravated this problem.

v. Healthcare

Rabbit is monogastric herbivore, hence requires specific line of treatment and healthcare, which is lacking under the present set up in the country. Diseases like canker, pasturellosis, enteritis, hairball, sore hock and coccidiosis are widely prevalent and account for heavy losses and poor health conditions in the rabbitaries. There is a need to strengthen the research and development programmes on disease diagnosis, disease control and line of treatment especially in the field of angora rabbit production.

vi. High Mortality Rate

The lack of adequate knowledge of health practices, indiscriminate breeding and health care results in heavy mortality ranging from 20-25 percent per year in rabbitaries. This reduces income and causes discouragement and closing up of the units.

vii. Small and Scattered Units

Since rearing of angora is mainly a hill enterprise, the topographic conditions permits scattered and small units, which are difficult to supervise on regular basis under the present setup of ongoing extension programmes of various Government Departments/Institutions, Agriculture Universities, Research Institutions and Non Governmental Organisations. This results in closing up of the units in primary stage. The farmer is unable to get the necessary assistance from the extension counter in case of problems faced by him in day-to-day management.

viii. Non- Availability of Quality Feed

Rabbit being a monogastric animal is sensitive to variations in feed quality. In spite of number of brands of pelleted feeds available in the market there are no standards denoted so far. The losses incurred due to toxins like aflatoxin in the past strongly suggests development of feed quality standards in terms of protein, fiber, energy and non- toxicity. Secondly, the non- availability of quality feed on regular basis has always remained a problem for small as well as large organized farms. The high feed cost and its poor quality greatly affects production potential.

ix. Lack of Extension and Monitoring Facilities

The existing training programmes undertaken by various Governments Department/ Institutions as well as Non- Government Organizations are only sufficient to motivate the trainees to adopt rabbit rearing. There is a need to introduce the concept of door to door monitoring, especially for the beginners as well as to organize on the spot refresher courses, demonstrations on regular basis. The necessary inputs like high yielding

angora rabbits, concentrate pelleted feed, cage material, shed material, medicines, minerals, quality germplasm and wool procurement centers are not available at a convenient location and the breeder is left to toil on his own.

x. Lack of Organized Marketing Facilities

At present, there are no organized marketing facilities available for angora wool or its produces. The producer has no linkage with the processor; hence, the producer suffers in the hands of intermediaries who pick up the wool at their will and at their denoted price resulting in sharp fluctuations in prices. This keeps the rabbit rearers in an uncertain and guessing situation.

xi. Non-Availability of Post Harvest Technology

Since angora wool has different fiber characteristics than sheep wool, hence, it is difficult to process the fiber to make good quality yarn for making woolen apparels on the available machinery. The fiber generates electrostatic current if spun on the so far available system, resulting in manufacture of uneven yarn and heavy losses. Non-availability of carding, blending and spinning facilities combined with inadequate training of rural women to process this fiber along with the other wool in their households has made the rearers totally dependent on the market of raw wool

xii. Lack of Suitable Processing and Blending Facilities

Angora wool has a different fiber of texture, hence, difficult to spin in to a quality yarn to make woolen apparels. At present, there is no suitable blending and processing facilities for angora wool to produce the requisite quality and quantity of yarn for garment manufacture.

xiii. Product Development and Design Development

Quality product production and its designing are essential to compete in National and International market. However, the technical know-how for quality products manufacture and designing is lacking for this high priced fiber. Production of quality angora blended yarn, vegetable dyeing of yarns and product designing are the fields, which need serious intervention.

xiv. Lack of Risk Coverage

Generally, due to poor marketing facilities and lack of adequate technical know-how, the breeder faces high economic losses. There is no Institution/Organization, which can ensure risk coverage through Insurance Companies. The breeder is unable to replace the lost valuable germplasm.

UTILITY OF ANGORA RABBIT REARING IN HILL AREAS OF UTTARAKHAND

The hill economy is mainly based on agriculture and animal husbandry practices. The agro- climatic conditions and difficult terrain of the hills, limit the production potential of both land and the animal. It has been a known fact that, under the shrinking pastureland and grazing problems, the tradition of sheep rearing is declining while the demand of wool is still there. To meet out the demand of wooly fiber, angora rabbit farming can play an important role. In addition to this, it can contribute towards improving the quality of apparels as well as upliftment of rural economy. Besides this, angora farming in hill areas has the following advantages.

i. Suitable Agro- Climatic Conditions

Angora rabbit breeding and rearing is best suited for a temperate range of 10 to 25 degree centigrade at a height of 4000 to 6000 feet above sea level. The agro- climatic and the topographic conditions of hilly regions are not only suitable for this enterprise but can generate a suitable source of income for the rural households and create employment opportunities for rural women and unemployed youths.

ii. Simple Food Habits

Rabbit has simple food habits and can be successfully reared on variety of fodder-based rations. Angora rabbits can effectively utilized the kitchen waste which otherwise can not be of much use to other animals.

iii. Space Requirement

The space requirement of rabbits is less and an adult requires approximately 3 sq. ft. area only. There are a variety of housing systems available, which can fit in without extra expenditure on purchase of land and can be easily set up in the fruit orchards, as a backyard rabbitary or on the commercial lines in a small piece of land. In a room of 15 X 12 ft. area, around 100 rabbits can be accommodated in multiple tire system for commercial production, which is almost equal to or less than the space required for equivalent adult broiler birds.

iv. Efficient Feed Converter

The feed conversion efficiency of rabbit is next to poultry. The average twelve week (slaughter weight) live weight produced per doe per litter amounts to 3 to 4 times of its own weight. In a year, one female can produce 10 to 12 times its live weight by delivering 4 to 5 litters under normal breeding.

v. Easy Management Practices

Up to 100 rabbits, a family does not require any outside labour to manage the daily routines of feeding, watering, cleaning, etc. Since rabbit is a docile and a harmless animal, it can easily be managed by women, children, old and disabled persons.

vi. Employment Opportunities

Angora rabbit breeding and rearing can provide a number of employment opportunities to the unemployment youth, rural women, small and marginal farmers and the persons involved in small cottage industry. Around 25 subsidiary industries can be identified.

For example:

- a. Breeding farm for providing quality germplasm as breeding stock to the rabbit units being run on small scale and commercial lines.
- b. Make available necessary inputs like cage & shed material, tags, feeders, packaging material for wool and other items for routine management.
- c. Provision of trained manpower for commercial rabbit units.
- d. Training facilities for technocrats and interested entrepreneurs.
- e. Shearing of rabbits on contractual system.
- f. Grading and collection of raw angora wool.
- g. Wool carding, blending and spinning.
- h. Marketing of raw angora wool.
- i. Manufacture of garments from various types of angora blended yarn.
- j. Dyeing and finishing of garments.
- k. Sale counters for quality angora thread and angora garments.
- l. Skin/pelt processing.
- m. Manufacture of garments from processed skin/pelts.
- n. Fabrication of cages, feeders, waterers for routine managements of rabbits.
- o. Supply of medicines, minerals, disinfectants, etc.

- p.** Guidance and provision of financial help in terms of loans.
- q.** Offering consultancy for setting up of commercial farms and the necessary guidance associate with it.
- r.** Supply of pelleted feed and forage to the rabbit farm.
- s.** Meat processing, it is packaging and marketing.
- t.** Supply of rabbit manure to horticulture and agriculture sector.
- u.** Fabrication of Gobar/Biogas plants for utilization of rabbit faeces as one of the potential substitutes to the existing inputs.
- v.** Utilization of rabbit carcasses and other offal in production of by- products and feeding material for fish and poultry farming.
- w.** Growing earth worms on rabbit faeces for fish and poultry farming.
- x.** Setting up of fast joints to introduce the delicacies of rabbit meat.
- y.** To assist various Government and Non- Government Agencies in monitoring and data collection of rabbit units.

In view of the constraints, as well as the importance discussed above in the rural set up of hilly regions of Uttarakhand, a strong need is felt to develop and propagate this livestock species to make a positive impact on the economy of rural households. Presently, agriculture and animal husbandry are witnessing poor economic returns in the hill areas. Angora rabbit breeding and rearing through diversification of land related activities would be instrumental in boosting the hill economy. Due to high quality of fiber produced by this livestock species, it fetches great demand and commands high price in National and International market. Hence, angora rabbit breeding and rearing can add a new dimension to the economic set up of the hilly regions of Uttarakhand.

Over the years, the wool production has shown an increase from 300 to 400 gms. per animal per year to 600 to 700 gms. per year due to introduction of breeds varieties like German angora. There is high degree of genetic variability with in the breeds of angora, i.e. Russian, British and German, which can be exploited to further improve the present status of qualitative and quantitative traits in this livestock species. The fast reproduction rate and short generation interval gives an opportunity for early selection and improvement as compared to other livestock species. Use of scientific tools for planned breeding selection, feeding, management, wool quality assessment, processing and marketing with regard to the agro- climatic and topographic location of the rabbit units can effectively improve the present wool production status and level of returns of the existing angora rabbit units.

A strong need is felt to initiate angora rabbit production and processing project in Uttarakhand hills, in view of the rural set up of this region. The project will not only improve the technical know-how but also ensure continuous flow of inputs and assured marketing facilities for the existing and the new angora rabbit units on small as well as commercial lines in order to boost this promising enterprise and for better economic returns.

OBJECTIVES OF THE PROJECT

The main objectives of the project are defined as below:

- i.** To open up two germplasm resource center to develop high yielding angora rabbits, which will serve the purpose of making available quality breeding stock for the beginners as well as replacement of males to the existing rabbit units for upgrading their flocks.
- ii.** To introduce the concept of scientific and planned rearing and record management in the field of angora rabbit production.
- iii.** To develop new and improved package of practices in the field of breeding and management, feeding, disease control and treatment.
- iv.** To provide facilities for on- farm testing of various technologies developed by Agriculture Universities, Research Organizations, Government Departments and Non Governmental Organisations in the field of angora rabbit production and wool processing.
- v.** To strengthen facilities for disease diagnosis and quality of concentrate feed, to ensure proper and regular health care and availability quality of feed to the angora rabbit breeders.
- vi.** To provide quality concentrate feed and ensuring its regular supply at denoted standards.
- vii.** To provide basic training in angora rabbit breeding and rearing so that women and educated unemployed youths can take up this profession and traditional farmers can supplement their income.
- viii.** To organise training programmes in the field of angora rabbit production, wool processing as well as to organise kisan melas, workshop, on the spot demonstrations with the objective to extend door-to-door service and interaction between the potential breeders and technocrats as and when required.
- ix.** To strengthen extension, monitoring and consultancy services to the existing and the up coming new units.

- x.** To provide/make available necessary inputs and guidance for development of new farms as well as to extend this facility to the existing operational units.
- xi.** To provide basic facilities in terms of shearing, production and marketing of wool, yarn and end products.
- xii.** To assist the producer in marketing of its produces through auctions, exhibitions, show- rooms, co-operatives, federations, etc. in the National and International markets.
- xiii.** To encourage the rural unemployed youths and women in this up coming and income generating enterprise, and to revive the tradition of household spinning and processing of this costly fiber as being done by the rural households since long.
- xiv.** To develop the techniques of cheaper cage making by bamboo and other substitute.
- xv.** To provide trainings and assistance to the producers in pelt/skin processing.
- xvi.** To develop techniques of manure/compost management.
- xvii.** To create opportunities for employment and income generation in rural areas by developing wool based village and cottage industries.
- xviii.** To follow integrated approach for development of integrated angora rabbit wool development programme to increase production and productivity of angora wool and angora woolen products.
- xix.** To involve various Government and Non-Government Development Agencies in the field of angora rabbit production, wool processing and marketing under existing small scale, cottage and handloom set up.

STATUS OF ANGORA WOOL PRODUCTION AND PROCESSING IN UTTARAKHAND

Angora rabbit breeding started in late 80s in the hilly area of Uttarakhand and at present there are about 500 viable small-scale units growing properly in the region. The average wool production per animal varies between 400 to 500 gms. Because of lack of suitable germplasm, supporting processing and marketing facilities for angora wool, the progress has been slow or rather stranded over the years. In spite of sincere efforts made by the Non- Governmental Development Agencies, Government Departments and Research Institutions, the angora rabbit breeder lacks technical know- how pertaining to management, rearing, shearing, processing and marketing of this new kind of costly fiber. The dependency on woolen mills for sale of raw wool has made it difficult for the producer to show

any progress in terms of multiplication to higher numbers as well as to introduce new germplasm to boost the wool production and its quality. However, a very small amount of wool is being processed under the rural set up by traditional hand spinning methods or by modifying the existing tools, the quality of yarn and the product does not fetch the desired returns. The available germplasm on the Research Institutes, Agriculture Universities, Non Government Organizations as well as the farmer's level has poor production potential, is highly inbred and has low variability to exploit. Hence, it seems difficult to improve the present production level unless high yielding angoras are introduced for upgrading.

In view of the topographic location of the present angora rabbit units, it would be advisable to set up germplasm resource center in hill area of Uttarakhand to meet the requirement of breeding stock and improving the existing flocks through upgrading as well as to create centers for training and assistance in processing and marketing of angora wool after blending with other fibers. A concentrated effort is required by the authorities to develop procurement and marketing facilities of raw angora wool to ensure returns to the angora rabbit breeders. Provision of necessary inputs and technical know-how combined with regular monitoring is another aspect to be seriously considered for introducing angora rabbit breeding and rearing as one of the income generating enterprise along with other existing animal husbandry practices in hill area of Uttarakhand. Proper record management, ear tagging of animals, awareness about importance of selection based on qualitative and quantitative traits needs to be introduced to give a forward thrust to this industry in this region.

In view of the existing status of angora rabbit breeding and rearing, processing and marketing conditions in the State, it would be advisable to incorporate the concept of processing about 50 per cent of the angora wool produced in every household in to yarn and finished products reduce dependency on fluctuating market of raw angora wool as well as to boost the returns through sale of finished products and angora blended yarns. The handlooms and handicrafts sector and the cottage industry, which is an integral part of every household in this region, can play a very important role in this aspect. This will not only ensure higher returns but also generate substantial employment opportunities for the unemployed population, especially rural women in their respective areas.

RATIONALES OF THE PROJECT

The proposed project area is economically backward. Though agriculture and animal husbandry have been the main and traditional occupation of inhabitants of the area, but due to environmental degradation, small land holdings, limited irrigation facilities and inhospitable soil and climatic conditions, the peasants of the area do not get desired income for the subsistence. In addition, the traditional sheep and goat rearing and wool based activities have been diminished due to increasing literacy on one hand and ban posed through Government policies on grazing on the other. Consequently, the traditional looms and charkhas have become idle.

Besides there are no village and cottage industries have been developed in the area due to absence of sustainable raw material, so the educated and uneducated unemployed youths are forced to migrate to the plains in search of jobs leaving their women folks in villages to struggle for their life. Consequently, changed circumstances have diverted the self-reliant economy to the money order economy.

Improvement in agriculture and animal husbandry will take a long time, but for the immediate return, the Hifeed has planned to initiate the Integrated Angora Rabbit wool Development Project in large scale for production and marketing of angora wool, yarn and hand made angora woolen garments to generate employment and raise family income, keeping young men and women in their native villages.

Rearing of angora rabbits needs less space, time and money and any family member with minimum experience and training can manage it. The Hifeed has decided to involve the families headed by women and educated unemployed youths, as the women are habituated in animal husbandry, sole responsible for the family and the youths are hunting for jobs.

Keeping in view, the rationale mentioned above, the Hifeed has initiated this programme during 1995- 96 on a small scale involving G. B. Pant University of Agriculture & Technology- Hill Campus, Ranichauri which has resulted in to establishment of more than 500 small angora rabbit units in 50 villages of Chamba, Jaunpur, Narendra Nagar, Thauldhar and Pratap Nagar Block of District Tehri Garhwal till 2004- 2005. The wool production has risen from nearly 50 Kgs. In 1995- 96 to 2000 Kgs. annually in 2002- 2003 valued Rs. 18.00 Lacs. The results obtained during this short span have shown the tremendous enthusiasm due to sharp increase in the family income from a minimum level of Rs. 5,000/- to maximum level of Rs. 90,000/- annually. The Financial Institutions also have encouragement due to hundred percent recoveries with in three years period from the borrowers.

RESOURCES AVAILABLE OR TO BE DEVELOPED

1. RESOURCES AVAILABLE

- The project area is situated at the altitude of 5000 feet and above in the hilly regions of Uttarakhand which is climatically suitable for rabbit rearing.
- G. B. Pant University of Agriculture & Technology- Hill Campus, Ranichauri and Defence Agriculture Research Laboratory (DARL), Defence Research & Development Organisation, Ministry of Defence, Government of India, Pithoragarh has started an angora rabbit breeding center for Research and Development (R & D).

- There are more than 650 angora rabbit units growing in Uttarakhand established by Hifeed and DARL and developing under the supervision of the Hifeed and DARL.
- Motor road links the project area with outer world.
- Wheat, maize, oil seeds, soya bean, peas and vegetables are grown in the area locally to supplement the feed requirement of rabbits.
- Veterinary services are available at G. B. Pant University of Agriculture & Technology- Hill Campus, Ranichauri, Defence Agriculture Research Laboratory (DARL), Defence Research & Development Organisation, Ministry of Defence, Government of India, Pithoragarh and Government Veterinary Hospitals at block headquarters.
- Hifeed already has established training- cum- production center at Ranichauri, impart trainings in rabbitary management, spinning, weaving and knitting and producing hand made angora woolen products with help of trained local artisans.
- Marketing of angora woolen products has already been started in small level.
- An angora rabbit breeding center has been established by Hifeed at Ranichauri for demonstration and extension.

2. RESOURCES TO BE DEVELOPED

- Import of high yielding angora rabbit germplasm and establishment of germplasm resource center at Defence Agriculture Research Laboratory (DARL), Defence Research & Development Organisation, Ministry of Defence, Government of India, Pithoragarh.
- Research and Development work (R&D) in the field of health care and nutrition by establishing health and nutrition lab at Defence Agriculture Research Laboratory (DARL), Defence Research & Development Organisation, Ministry of Defence, Government of India, Pithoragarh
- Research and Development work (R&D) in the field of pelt processing should be started.
- Training and extension programme on large scale should be started to make the programme economically viable.
- A common facility center for carding, blending, spinning, weaving, knitting and processing of angora wool in to yarn and hand made finished products should be established.

- Facilities for product development, design development and product diversification should be developed.
- Skill upgradation of the producers and artisans by providing technical inputs should be started.
- Research and Development (R & D) work for use of vegetable and natural dyes in angora woolen products should be started.
- Production and marketing programme on large scale should be planned to make the whole programme economically viable.

IMPLEMENTING AGENCY

Himalayan Institute For Environment, Ecology & Development- Hifeed, Ranichauri, District- Tehri Garhwal, Uttarakhand, a Voluntary Social Organisation working for all round development of hill peoples since 1995 will implement the project in technical collaboration and support with Defence Agriculture Research Laboratory (DARL), Defence Research & Development Organisation (DRDO), Ministry of Defence, Government of India, Pithoragarh, Uttarakhand, G.B. Pant University of Agriculture & Technology- Hill Campus, Ranichauri, Research Institutes, Designing Institutes, Marketing Organisations, NGOs, SHGs, beneficiaries, etc.

ESTIMATED EMPLOYMENT GENERATION (DIRECTLY AS WELL AS INDIRECTLY) BY THE PROPOSED PROJECT WITH IN THREE YEAR OF TIME PERIOD

- | | | | |
|---|---|---------|------|
| • By setting up of high yielding angora rabbit germplasm resource center | - | Approx. | 25 |
| • By strengthening Research and Development (R & D) in the field of health care and quality feed production | - | Approx. | 25 |
| • By training, extension and distribution of angora rabbit units to farmers households | - | Approx. | 1000 |
| • By spinning of wool in to yarn | - | Approx. | 1000 |
| • By common facility center for carding, blending and processing of raw angora wool in to finished products | - | Approx. | 35 |
| • By product development, design development and product diversification | - | Approx. | 35 |
| • By skill upgradation and technological inputs | - | Approx. | 150 |

- By Research and Development (R & D) for use of vegetable and natural dyes - Approx. 40
- By production and marketing programme - Approx. 75
- By manufacturing of cage material, shed material, ear tags, feeders, water pots, scissors, packaging material for wool, yarn and garments, etc. - Approx. 30
- By shearing of rabbits on contractual system - Approx. 45
- By grading and collection of raw angora wool - Approx. 25
- By supply of medicines and minerals - Approx. 10
- By consultancy services - Approx. 15
- By supply of pelleted feed and forage - Approx. 15
- By meat processing, its packaging and marketing - Approx. 15
- By collection and supply of rabbit manure to horticulture and agriculture sector - Approx. 25
- By skin/pelt processing - Approx. 25
- By co-ordination, project implementation, supervision, monitoring & evaluation, etc. - Approx. 75

Total	2,665	

TECHNICAL NORMS AND FINANCIAL VIABILITY OF A VILLAGE/ FARMER LEVEL ANGORA RABBIT UNIT

• Foundation stock (unit size)	:	8 does + 4 bucks
• Maturity age	:	6 months
• Adult body weight	:	3.5 Kg approximate
• Breeding age	:	6 months
• Gestation period	:	30 days (+ or – 2 days)
• Kindling percentage	:	50 %
• Number of kindling in a year	:	3 to 4
• Average litter size	:	5 kits
• Weaning period	:	4 to 6 weeks
• Mortality in adults	:	25 % approximate
• Mortality in progeny stock	:	40 % approximate
• Breedable economic life	:	4 years
• Cage size	:	24" X 18" X 18"
• Cost of cage	:	Rs. 400/- per cage
• Feed requirement for adults	:	150 gms. per day
• Hey requirement for adults	:	175 gms. per day
• Feed requirement for weaners	:	50 gms. per day
• Hey requirement for weaners	:	75 gms. per day
• Feed cost	:	Rs. 10/- per Kg.
• Wool yield in adults in a year	:	800 gms. approximate
• Wool yield in young's in first six months	:	100 gms. Approximate
• Wool yield in young's in second six months	:	300 gms. approximate
• Wool price	:	Rs. 850/- per Kg.
• Wool shearing in a year	:	3 or 4
• Cost of one adult rabbit	:	Rs. 1,000/- to Rs. 1,500/-
• Cost of one young rabbit	:	Rs. 500/- to Rs. 750/-
• Average annual income to the angora rabbit breeder from wool and rabbit sale from a unit of 50 angora rabbits	:	Rs. 18,000/-
• Average annual income to the spinners by spinning	:	Rs. 12,000/-
• Average annual income to the weavers by weaving	:	Rs. 25,000/-
• Average annual income to the knitters by knitting	:	Rs. 28,000/

UNIT COST OF AN ANGORA RABBIT WOOL PRODUCTION UNIT

A. CAPITAL COST/FIXED COST

1.	Rabbits- 12 Nos. @ Rs. 1,000.00 per rabbit	Rs. 12,000.00
2.	Breeders cages- 24 Nos. @ Rs. 250.00 per cage	Rs. 6,000.00
3.	Feeders & waterers- 25 Nos. @ Rs. 20.00 per Nos.	Rs. 500.00
4.	Scissors- 2 Nos. @ Rs. 50.00 per Nos.	Rs. 100.00
5.	Nest boxes- 8 Nos. @ Rs. 50.00 each	Rs. 400.00
6.	Renovation of shed for rabbits	Rs. 5,000.00

SUB TOTAL Rs. 24,000.00

B. RECURRING COST

1.	Insurance- 7.5 % of sum assured	Rs. 900.00
2.	Feed for rabbits	Rs. 2,100.00
3.	Medicines and Minerals	Rs. 1,000.00
4.	Manpower and Labour - @ Rs. 500.00 per month	Rs. 6,000.00
5.	Transportation of rabbits, cages/contingencies, etc.	Rs. 1,000.00

SUB TOTAL Rs. 11,000.00

TOTAL Rs. 35,000.00

YIELD AND INCOME PER UNIT

(In Rupees)

S.N.	Particulars	1 st Year	2 nd Year	3 rd Year	4 th Year	Total
1.	Breeders stock-12 12 rabbits X 1.00 Kg. per year per rabbit = 12.00 Kg. @ Rs. 800.00 per Kg.	9,000	9,000	9,000	9,000	36,000
2.	Progeny stock- 50 50 rabbits X 0.500 Kg. for first year = 25.00 Kg. 50 rabbits X 1.00 Kg. for second year = 50.00 Kg. @ Rs. 800.00 per Kg.	20,000	40,000	40,000	40,000	1,40,000
3.	Sale of rabbits of 6 months to one year age- approx. 10 rabbits per year @ Rs. 1,000.00 per rabbit	10,000	10,000	10,000	10,000	40,000
	TOTAL	39,000	59,000	59,000	59,000	2,16,000

PROJECT IMPLEMENTATION

The project implementation will have the following components:

- i.** Establishment of two high yielding angora rabbit germplasm resource center.
- ii.** Strengthening of research and development (R & D) in the field of health care and nutrition.
- iii.** Training and technical support to angora rabbit breeders, NGOs, Self- Help Groups (SHGs) and Extension Workers.
- iv.** To take up activities related to extension and distribution of angora rabbit units to farmers households.
- v.** Establishment of feed manufacturing unit for concentrate and quality feed production for angora rabbits.
- vi.** To set up common facility center for carding, blending, spinning, weaving, knitting and processing of raw angora wool in to yarn and hand made finished products and technological input for upgrading the traditional looms, charkhas and production and processing equipments and machineries, cheaper cage making, low cost housing, etc.
- vii.** To set up facilities for product development, design development and product diversification.
- viii** Research and Development (R & D) for use of vegetable and natural dyes in angora woolen products.
- ix.** Production and marketing programme for:
 - a.** Raw angora wool.
 - b.** Angora wool blended yarn.
 - c.** Finished hand made angora woolen products.
- x.** Trainings, skill upgradation and human resource development.
- xi.** Infrastructure development
- xii.** Revolving fund
- xiii.** Co-ordination, supervision, monitoring & evaluation, impact analysis and assessment.
- xiv.** Project administration.

I. ESTABLISHMENT OF TWO HIGH YIELDING ANGORA RABBIT GERMLASM RESOURCE CENTER

The project proposes to establish two angora rabbit germplasm resource centre to provide basic breeding stock and technical know-how for opening new units as well as necessary support to the existing ones in the form of easy availability of healthcare, quality feed and monitoring services. For this purpose 200 high yielding angora rabbits (50 males and 150 females) of 8 to 10 sire lines with an annual wool production of not less than 1200 to 1500 gms. per annum will be imported from a suitable source(s) outside the country or inside the country. This will also require a survey/visit of the Scientists/Experts, Government Officials, NGO functionaries and progressive beneficiaries to Germany, Holland, Denmark, China and France to identify the germplasm best suited for the agro-climatic conditions and as per existing status of this livestock available in the country and to get first hand knowledge of angora wool processing facilities available in these countries.

II. STRENGTHENING OF RESEARCH AND DEVELOPMENT (R & D) IN THE FIELD OF HEALTH CARE AND NUTRITION

The research and development in the fields of healthcare and nutrition specifically for angora rabbits will be strengthen under the set up Hifeed in the respective areas by providing necessary equipments and monitory support for establishment of health and nutrition laboratory.

Hifeed will develop the health care practices and formula for concentrate and quality feed production and extend it to farmer level through extension network.

III. TRAINING AND TECHNICAL SUPPORT TO ANGORA RABBIT BREEDERS, NGOs, SHGs AND EXTENSION WORKERS

Training in angora rabbit breeding and rearing to rabbit breeders and extension workers will be conducted in batches with 20 to 25 selected beneficiaries in each batch and total 1000 beneficiaries in three years from various clusters identified in the project areas. The training programme shall have duration of 10 days and will be conducted by Hifeed with technical support of Defence Agriculture Research Laboratory (DARL), Pithoragarh and G. B. Pant University of Agriculture & Technology- Hill Campus, Ranichauri on the concept of learning by doing system and the proposed angora wool processing units pertaining to the project areas. On completion of training programme the beneficiaries will be issued an identity card and training certificate by Hifeed to avail the benefits of processing unit and various inputs associated with day to day rearing of angora rabbits, i.e. feed, cage material, purchase of breeding males at subsidized rates and availing marketing facilities for wool as well as finished products at the proposed centers.

A detailed training course of 10 days to the farmers in rabbit breeding and rearing and rabbitary management is designed as below:

- i.** General care and management practices.
- ii.** Demonstration of various breeds of rabbits for wool production, their habitation and other characters.
- iii.** Rabbit anatomy and general understanding of the animal habits.
- iv.** Shelter and housing.
- v.** Nutrition and feeding.
- vi.** Mating time and techniques.
- vii.** Reproduction and breeding.
- viii.** Management of pregnant does, nursing of young kits, weaning and other management practices of offspring's.
- ix.** Rabbit health, knowledge of diseases, diagnosis and treatment.
- x.** Shearing of rabbits, wool characteristics, grading, and storage of wool.
- xi.** Veterinary skills.
- xii.** Different ingredients and types of feed formulations, feeding practices with special reference to fur breeding animals.
- xiii.** Record keeping and breeding with special reference to maintenance of different line to avoid inbreeding.
- xiv.** Marketing of surplus products.
- xv.** Forage management- grasses, fodder, trees, etc.
- xvi.** Manure use.
- xvii.** Leadership training- Motivators, Extension Workers, etc.
- xviii.** Farm management.

IV. TO TAKE UP ACTIVITIES RELATED TO EXTENSION AND DISTRIBUTION OF ANGORA RABBIT UNITS TO FARMERS HOUSEHOLDS

The major objective under this programme is to encourage angora rabbit breeding and rearing and processing of angora wool in rural sector to improve the economic status of rural households as well as to generate income and employment generation opportunities for rural unemployed youths and women in denoted areas. The project proposes to establish 1000 angora production and processing units in identified areas of three wool/border Districts of Uttarakhand i.e. Tehri, Uttarkashi and Chamoli. Necessary financial and infrastructure facilities on share basis will be provided to identify clusters of beneficiaries in different locations in the proposed project areas.

The scheme for extension and distribution of angora rabbits to farmer's households shall involve 25% share of the beneficiary and 75% project funds for establishing the units. Some NGOs will be identified to execute such an activities in the proposed project area.

An assistance for construction of shed for 50 animals to the beneficiaries attaining the target of 50 angora rabbits after completion of one year period will be provided @ Rs. 10,000.00 each i.e. 50% of the shed cost. It is assumed that approximate 50% of beneficiaries will achieve the target of 50 angora rabbits in one year.

A training programme to angora rabbit breeders in spinning of wool in to yarn will be carried out for one month duration so that they could spun their angora wool for value addition. One bageshwari charkha to approximate 300 rabbit breeders will be provided on 25% share basis.

The project proposes to encourage the existing NGOs, Self- Help Groups (SHGs) and Co-operative Societies to implement and extend this activity in identified clusters of beneficiaries in different locations in the proposed project areas.

ESTIMATED PROJECTION OF ANGORA RABBIT POPULATION AND ANGORA WOOL PRODUCTION UNDER THE PROJECT FOR THREE YEARS:

S.N.	Particulars	1st year	2nd year	3rd year	Total
1.	No. of Districts covered	2			2
1.	No. of villages to be covered	30	35	35	100
2.	No. of families to be benefited @ 10 families per village	300	350	350	1000
3.	No. of rabbits distributed to the families @ 12 rabbits (8f + 4m) to each family	3,600	4,200	4,200	12,000
4.	Population of rabbits under the project (a unit of 12 rabbit will become 30 in first year and 50 in second year and will be maintained at that level) 1 st year 2 nd year 3 rd year	9,000	15,000 10,500	15,000 17,500 10,500	39,000 28,000 10,500
5.	Total population of the angora rabbits in the ambit	9,000	25,500	43,000	77,500
6.	Total wool production (Kgs.) @ 1.0 Kg. per animal per year	9,000	25,500	43,000	77,500
7.	Approximate market value of angora wool output @ Rs. 800/- per Kg. (Rs. In Lacs)	72.00	204.00	344.00	620.00

V. ESTABLISHMENT OF FEED MANUFACTURING UNIT FOR CONCENTRATE AND QUALITY FEED PRODUCTION FOR ANGORA RABBITS

The Commercial production of feed for germplasm resource centre as well as field units will be handled by Hifeed/Co- operative Society or any private entrepreneur who may be provided some support in exchange of delivering the desired input/feed of specified standard quality to the germplasm resource centre and farmers. The feed manufacturing unit will manufacture the concentrate and quality feed according to the formula developed the nutrition laboratory established under the project. The feed production unit may be establish at a suitable place according to availability of raw material and basic infrastructure facilities.

VI. TO SET UP COMMON FACILITY CENTER FOR CARDING, BLENDING, SPINNING, WEAVING, KNITTING AND PROCESSING OF RAW ANGORA WOOL IN TO YARN AND HAND MADE FINISHED PRODUCTS AND TECHNOLOGICAL INPUT FOR UPGRADING THE TRADITIONAL LOOMS, CHARKHAS AND PRODUCTION AND PROCESSING EQUIPMENTS AND MACHINERIES, CHEAPER CAGE MAKING, LOW COST HOUSING, ETC.

In view of an ensure market for raw angora wool, it would be essential to incorporate the concept of processing approximate 50 percent of the raw wool produced in every household in to yarn as well as finished products. For this purpose, one centers will be established to train especially rural women in carding, blending, spinning, weaving, knitting and processing of angora wool in to yarn and hand made finished products. This facility will also be extended to the woolgrowers to process their produce. The project proposes to encourage the existing NGOs, Self- Help Groups (SHGs) and Co-operative Societies by providing such a facility on nominal cost basis.

While it is well known that weaving traditions in these locations exist in every household, the production by them primarily meets their own domestic requirements. This is because of inadequate availability of raw material, low productivity of the looms, charkhas, production and processing equipments and machineries and poor skill of the weavers in weaving techniques. Therefore, what is important in this respect is to look at the existing structure of the handlooms, charkhas, production and processing equipments and machineries and suggest any technical changes that can be brought in to improve the productivity of these equipments and machineries. Also the value addition in these products will come only if weavers/producers are encouraged to produce exquisite quality products using good designs and colour combinations. This would be possible only if important peripherals like Dobby and Jacquards are also introduced for weaving purposes. The system of using weft for preparation of designs has also to be encouraged to take up production of items that can command larger markets.

The objectives of the scheme are:

- i.** To increase the utilization of angora wool.
- ii.** To upgrade the skill of existing weavers/craft persons.
- iii.** To make available enough skilled manpower to the woolen sector.
- iv.** To increase production of diversified woolen products.
- v.** To generate opportunities for income and employment.
- vi.** To introduce and upgrade the traditional looms, charkhas and production and processing equipments and machineries.
- vii.** To introduce the techniques and R & D work for cheaper cage making, low cost housing, etc.

The project proposes to encourage the existing NGOs, Self- Help Groups (SHGs) and Co-operative Societies to implement and extend this activity in identified clusters of beneficiaries in different locations in the proposed project areas with the help and support of Hifeed.

VII. TO SET UP FACILITIES FOR PRODUCT DEVELOPMENT, DESIGN DEVELOPMENT AND PRODUCT DIVERSIFICATION

Under the project, necessary infrastructural support and training will be provided to produce value added product from angora wool blended yarns. Linkage will be developed between the on going activities in the private sector with the handlooms and the handicrafts sector, small and cottage industries to diversify their present set ups. Rural women will be encouraged in this field to improve the economic status of their households. In order to ensure maximum value addition to the farmer's households, it would be necessary to evolve a comprehensive strategy for product development, design inputs and product diversification. In majority of the rural households, which would be involved in angora rabbit rearing, spinning and weaving activity is an integral part of their households. However, at present most of the production undertaken on handlooms, handled by them caters to their own domestic clothing needs. No organized efforts have been made to advise them on taking up production of such products that can sell in the market and thereby provide incremental income to them from spinning, weaving and knitting activity. With additional raw angora wool, blending and processing facilities with these households, it would be advisable to evolve a package of programme, which encourages them in taking up production of value added products with suitable design interventions on a sustainable basis. For this purpose a panel of designers either on a freelance basis or drawn from National Institute of Fashion Technology (NIFT), National Institute of

Design (NID), etc. shall be constituted to work in these areas and create a set of products, which will have market acceptability on a long term basis. Care should be taken to ensure that while designing new products the ethnic character of local motifs and designs are retained or suitably modified to conform to the market requirements. Some infrastructural supports like construction of design center, computer unit for designing development, trainings, manpower and staff support, overhead expenses for this activity, etc. will also be added.

The project proposes to encourage the existing NGOs, Self- Help Groups (SHGs) and Co-operative Societies to implement and extend this activity in identified clusters of beneficiaries in different locations in the proposed project areas with the help and support of Hifeed.

IX. RESEARCH AND DEVELOPMENT (R & D) FOR USE OF VEGETABLE AND NATURAL DYES IN ANGORA WOOLEN PRODUCTS

The handloom weaving through out the country is characterized by exquisite designs with different colour combination and where weft is used to basically for bringing out the character of the design. In other words the use of dyed yarn is essential for the handloom weaving and producing products, which can get better price in the market. It would be necessary, therefore, to conduct certain workshops to demonstrate improved dyeing practices so that farmers/weavers at their households are encouraged to produce products, which can have better value addition. In this context it is also necessary to encourage the use of vegetable and natural dyes in the production of angora blended fabrics, made- ups and garments.

Some infrastructural support like construction of work shed, purchase of dyes, dyeing equipments, trainings, manpower and staff support and overhead expenses for this activity will also be added.

The project proposes to encourage the existing NGOs, Self- Help Groups (SHGs) and Co-operative Societies to implement and extend this activity in identified clusters of beneficiaries in different locations in the proposed project areas with the help and support of Hifeed.

X. PRODUCTION AND MARKETING PROGRAMME

One of the most critical areas for the success of the project would be depend up on the marketing, which shall have to cover three different segments viz; raw angora wool, angora wool blended yarns and hand made finished products. Each of these three activities are important for providing requisite returns to the farmers, spinners, weavers, knitters and different Organizations engaged in development of this sector. Each of these three activities will require a different strategy to be evolved and will have different market segments to attend it. The relevant strategies for each of these three sectors are detailed below:

a. Raw Angora Wool

One of the main regions for the poor success of the angora development programme can be attributed to the current marketing practices being evolved in the producing centers. The raw angora wool produced by the farmers on the basis of four to five shearing that they takes up during the year is not large in quantity at the household level except at a few places where this has been taken up on a larger farms. In the absence of adequate processing facilities he is at the mercy of the wool traders who pick up raw wool without giving him remunerative returns, which is not enough even to meet the costs. The State Wool Board have not been able to mobilize sufficient resources to provide minimum support price to the farmers nor have been able to purchase raw angora wool from the farmers on regular basis in the absence of forward linkages available to them. Therefore, farmer is really left with two options either to sell out to the trader at ridiculously low price or use raw wool available to meet his domestic needs. Neither of these two things helps in generating incremental income, which can plough back for enhancement and better angora rabbit farming. It is, Therefore, extremely necessary to evolve a system wherein farmers is in a position to fetch better returns of his produce, which helps in capacity building and therefore, encourage him to invest in this activity with renewed strength. The following three systems are recommended:

- i.** As part of the project, it is proposed to take up extension and distribution of angora rabbits in a cluster form. The beneficiary farmers would be encouraged to form either their own Co-operative Societies or Self- Help Groups to take up marketing of their produce in a collective manner.
- ii.** The local wool federation could be encouraged to evolve a system of public auctions of raw angora wool collected from the beneficiary farmers in a frequency of twice or thrice a year. Appropriate procedure for public auction system could be prepared and notified well in advance to the farmers in that region. The system of public auction could also be handled alternatively either by NGOs or by SHGs floated by farmers themselves.
- iii.** At State Government level, a system of Minimum Support Price (MSP) may be introduced. For this purpose the Ministry of Textiles and the Institutions under it may take it up with the concerned State Government or evolve a system where the Central Government Organizations could undertake this activity. It must be reiterated here that unless the remunerative returns are made available to the farmers, angora production and the rabbitary will not succeed as a sustainable activity.

One important factor, which also contributes towards depression of raw angora wool prices in the market, is unchecked import of angora wool particularly from China. If angora rabbit development programme is to succeed in providing incremental income to the farmers, it would be necessary to provide some protection to them, especially against the unchecked import or smuggling of raw angora wool in to the country. Rationalizing the import duty tariff structure could perhaps do this.

b. Angora Wool Blended Yarns

This project has introduced a system of taking up blending of angora wool with other fibers and processing it for production of better quality yarn which could go in for production of a large variety of products. The project recommends 25 to 30 per cent of the raw angora wool produced by the farmers to be converted for value addition. It must be mentioned that once this is achieved it will build up the capacity of the farmers to market their products more effectively. The production of blended yarn can also help the partly use it in production of finished products and partly in getting better value added to the farming activity. The presence of a large number of handlooms in other areas and elsewhere in the country will ensure them better returns. However, it would be necessary to identify a few NGOs in that area who could assist the farmers or the SHGs to market their yarn in a better manner. Also further value addition for yarn would come if the NGOs can also be supported to take up dyeing and finishing facilities. In other words, the blended angora yarn can be sold in its natural as well as dyed form and will provide better margins to the producers.

c. Hand Made Finished Products

This particular segment will require a comprehensive marketing programme both for National as well as International markets. To a very large extent the success of this scheme will depend up on the programme for product development, design input and the product diversification as detailed above. The handmade finished products made by the weavers/knitters in that area will have to be sold through different marketing mechanisms including participation in domestic exhibitions, International fairs, buyer's- seller's meet, by opening of emporiums and linkage with Government and the Co-operative sector marketing outlets such as Development Commissioner- Handlooms and Handicrafts, Wool and Woolens Export Promotion Council, Central Wool Development Board, Khadi & Village Industries Commission, U.P. Handlooms, U.P. Export Corporation Ltd., UPICA, Garhwal and Kumaun Mandal Vikas Nigam Ltd., etc. Private sector marketing Organizations and exporters will also be exploited for marketing aspects.

The Organization will devise aggressive marketing programmes, which will encircle export as well as International market. For the International market, the Organization will develop its own web site, which will feature the basic information about angora wool and its product range. The Organization will also get it registered with the American Rabbit Breeders Association, British Council of Rabbits, etc., which are NGOs working for providing a platform to the people who are engaged in this trade. The Organization will also get its product registered on the sites, which offers E- Commerce or E- Shopping. As a part of the domestic advertisement, the Organization will launch a campaign, which will cover the print media like fashion magazine and the newspapers. The Organization will also offer to give the distribution network to different people so as to have more access in the domestic markets also.

XI. TRAININGS, SKILL UPGRADATION AND HUMAN RESOURCE DEVELOPMENT

Skill upgradation and human resource development programme will be implemented by organising short term and long term trainings of NGOs, SHGs, beneficiaries, producers, artisans, etc. in angora rabbit breeding and rearing, angora wool spinning, weaving, knitting, skin/pelt processing, dyeing and finishing, designing development, use of vegetable and natural dyes, management trainings, exposure tours and visits, meetings, workshop, seminars, etc. The training fund will be utilized to organized short term and long term trainings to the NGOs, SHGs, beneficiaries, producers, artisans, etc. in:

- Angora wool spinning, weaving and knitting, skin/pelt processing
- Washing, dyeing and finishing
- Designing development
- Use of vegetable and natural dyes
- Raw material for trainings
- Stipend and traveling to trainees
- Printing, stationeries, training literatures, etc.
- Honorarium and cost of trainers/resource persons
- Exposure tours and visits
- Technical consultancy
- Meetings, workshop, seminars, etc.
- Management trainings.

XII. INFRASTRUCTURE DEVELOPMENT

Basic infrastructures to implement the programme will be developed in different areas of where project is proposed to implement. Infrastructure fund will be spend on:

- Cost of land and site development
- Construction of rabbit sheds
- Construction of training centers
- Construction of production centers
- Storage structures for feed, wool, products, etc.
- Work shed for R & D work
- Office infrastructure
- Technology resource centre
- Furniture and fixtures
- Computers, printers, fax, photocopier, LCD Projector, overhead projectors and training equipments
- Vehicles for field operation

XIII. REVOLVING FUND

The project proposes to provide all the backward and forward linkages to rabbit breeders and rearers, spinners, weavers, knitters, artisans and producers and all the marketing facilities to purchase their wool, yarn, garments and finished products. For this purpose a provision of revolving is required in the project. The revolving fund will be utilized for:

- Purchase of angora wool from the beneficiaries.
- Purchase of angora yarn from the beneficiaries.
- Purchase of angora garments and finished products from the beneficiaries.
- Spinning, weaving and knitting wages.
- Carding and blending wages.
- Dyeing and finishing wages.
- Purchase of feed to provide angora rabbit breeders.
- Labour and wages.

XIV. CO-ORDINATION, SUPERVISION, MONITORING & EVALUATION, IMPACT ANALYSIS AND ASSESSMENT

A coordination committee will be constituted for supervision, monitoring & evaluation, impact analysis and assessment of the project.

XV. PROJECT ADMINISTRATION

To implement the project in four Wool/Border Districts of Uttarakhand, a provision of funds has been provided in the project for three years to meet out the administrative cost and implementation expenses of the project.

BUDGET AT A GLANCE

(Rs. in Lacs)

S.N.	Item of Expenditure	Total
1.	Establishment of two high yielding angora rabbit germplasm resource centers	292.00
2.	Strengthening of research and development (R & D) in the field of health care and nutrition	134.50
3.	Training and technical support to angora rabbit breeders, NGOs, Self- Help Groups (SHGs) and Extension Workers	28.50
4.	To take up activities related to extension and distribution of angora rabbit units to farmers households	217.32
5.	Establishment of feed manufacturing unit for concentrate and quality feed production for angora rabbits	17.00
6.	To set up common facility center for carding, blending, spinning, weaving, knitting and processing of raw angora wool in to yarn and hand made finished products and technological input for upgrading the traditional looms, charkhas and production and processing equipments and machineries, cheaper cage making, low cost housing, etc.	42.00
7.	To set up facilities for product development, design development and product diversification	35.00
8.	Research and Development (R & D) for use of vegetable and natural dyes in angora woolen products	20.00
9.	Production and marketing programme	238.00
	Sub- Total	1,024.32
10.	Trainings, skill upgradation and human resource development- 5%	59.20
11.	Infrastructure development- 10%	118.394
12.	Revolving fund- 5%	59.20
13.	Co-ordination, supervision, monitoring & evaluation, impact analysis and assessment	38.00
14.	Project Administration, mobility and overhead expenses	121.62
	TOTAL COST OF THE PROJECT	1,420.734

DETAILED PROJECT BUDGETING

I. ESTABLISHMENT OF TWO HIGH YIELDING ANGORA RABBIT GERMPLASM RESOURCE CENTERS

(Rs. in Lacs)

S.N	Item of Expenditure	1 st Year	2 nd Year	3 rd Year	Total
i.	Non- Recurring Expenses				
1.	Import of breeding stock of 200 angora rabbits (150 females + 50 males). @ Rs. 50,000.00 each	100.00			100.00
2.	Insurance- to cover the risk factors @ 7.5% of sum assured	07.50			07.50
3.	Cages- 2,000 Nos. for keeping rabbits in galvanized alwire cages @ Rs. 1,000.00 per cage	20.00			20.00
4.	Shearing machines with accessories for shearing of rabbits at germplasm center as well as to extend the facility to private rabbit units- 8 Nos. @ Rs. 15,000.00 each	01.20			01.20
5.	Weighing balances of varying capacity for weighing of rabbits at various physiological stags as well as weighing of wool. Electronic- 2 Nos. @ Rs. 75,000.00 each Manual- 4 Nos. @ Rs. 10,000.00 each	01.90			01.90
6.	Animal sheds to house a germplasm of 2000 adult angora rabbits of different physiological stages- 12 Nos. <ul style="list-style-type: none"> • Young stock • Breeding pens • Pregnant does • Weaned kids • Buck pens • Culled stock @ Rs. 5,00,000.00 each including transportation and hill freight & cartage, etc.	60.00			60.00

7.	Shearing rooms to carry out routine shearing of rabbits and storage of raw wool. 2 Nos. with vinyl floor and wool storage facility. @ Rs. 1,50,000.00 each including transportation and hill freight & cartage, etc.	03.00			03.00
8.	Computers and Peripherals Pentium- IV with lesser printer, inkjet printer, scanner and accessories for data recording, planning, report writing as well as maintaining up to date status of rabbit units under the project.	03.00			03.00
9.	Furniture & Fixtures for two germplasm resource centers	02.00			02.00
10.	Foreign visit of experts/scientists, Government officials, NGO functionaries, beneficiaries, etc. to survey and select germplasm of angora rabbits for germplasm centers and to get first hand knowledge of angora wool processing facilities available in the countries like Germany, France, Holland, America, Australia, Denmark, China, etc.	25.00			25.00
	SUB- TOTAL	223.60			223.60
ii.	Recurring Expenses				
11.	Concentrate feed for germplasm resource centers @ Rs. 1,000.00 per Qtl. including transportation cost 0.150 Kg. per animal per day for 365 days <ul style="list-style-type: none"> • approx. 550.00 Qtls. for 1,000 animals in 1st year • approx. 825.00 Qtls. for 1,500 animals in 2nd year • approx. 1100.00 Qtls. for 2,000 animals in 3rd year 	05.50	08.25	11.00	24.75

12.	Labour requirement for routine management on contract basis for germplasm resource centers-10 person @ Rs. 2,500.00 per person per month	03.00	03.00	03.00	09.00
13.	Consultancy to experts to visit the germplasm resource center @ Rs. 1,00,000.00 per year	01.00	01.00	01.00	03.00
14.	Miscellaneous items like brooms, brushes, disinfectants, wool packaging material as well water and electricity charges, etc. for two germplasm resource centers @ Rs. 100.00 per animal per year for routine management practices at germplasm resource center	01.00	01.50	02.00	04.50
15.	Health care @ Rs. 50.00 per animal per year	00.50	00.75	01.00	02.25
16.	Veterinary Officer- 2 @ Rs. 15,000.00 per month	03.60	03.60	03.60	10.80
17.	Junior Research Fellow (JRF)- 2 @ Rs. 5,000.00 per person	01.20	01.20	01.20	03.60
18.	TA/DA and hiring of vehicles for project staff	01.00	01.50	02.00	04.50
19.	Administrative overheads for two germplasm resource center for printing & stationery, postage & telegram, photo state & xerox, telephone & fax, visitors entertainment, etc. @ Rs. 2,00,000.00 per year	02.00	02.00	02.00	06.00
20.	SUB- TOTAL	18.80	22.80	26.80	68.40
	TOTAL	242.40	22.80	26.80	292.00

II. STRENGTHENING OF RESEARCH AND DEVELOPMENT (R & D) IN THE FIELD OF HEALTH CARE AND NUTRITION

(Rs. in Lacs)

S.N.	Item of Expenditure	1 st Year	2 nd Year	3 rd Year	Total
i.	Non- Recurring Expenses				
1.	PCR machine	8.00			8.00
2.	Vertical and horizontal gel electrophoresis	3.00			3.00
3.	High speed refrigerated centrifuge (Floor model)	8.00			8.00
4.	Deep freezer – 20 ^o C	0.60			0.60
5.	Gel documentation system	6.00			6.00
6.	Incubator shaker	3.00			3.00
7.	Automated water bath	2.50			2.50
8.	Autoclave	1.00			1.00
9.	Laminar air flow	1.20			1.20
10.	pH mater	0.70			0.70
11.	Micro-wave oven	0.40			0.40
12.	Water purification system	3.00			3.00
13.	Fluorotoxin meter	10.00			10.00
14.	Atomic absorption spectrophotometer (Graphite furnace)	20.00			20.00
15.	Hematology analyzer	10.00			10.00
16.	Immuno assay analyzer	8.00			8.00
17.	Automated bacteriological identification system	6.00			6.00
18.	UV-VIS spectrophotometer	5.00			5.00
19.	Flame photometer	0.75			0.75
20.	Auto soxhlet	3.00			3.00
21.	Hot air oven	0.50			0.50
22.	P.C. based microscope	5.00			5.00
23.	BOD incubator	0.60			0.60
24.	Micropipettes of variable volume	1.75			1.75
25.	Weighing balance (up to 0.1 mg)	1.00			1.00
	SUB-TOTAL	109.00			109.00
ii.	Recurring Expenses				
26.	Glassware, chemicals and other miscellaneous expenses for research labs to carrying out R & D in the research labs of nutrition and health, data recording on various qualitative and quantitative traits on the germplasm center as well as of field units	05.00	05.00	05.00	15.00

27.	Senior Research Fellow (SRF)- 2 @ Rs. 7,500.00 per person per month	01.80	01.80	01.80	05.40
28.	Junior Research Fellow (JRF)- 2 @ Rs. 5,000.00 per person	01.20	01.20	01.20	03.60
29.	Administrative expenses @ Rs. 50,000.00 per year	00.50	00.50	00.50	01.50
	SUB- TOTAL	08.50	08.50	08.50	25.50
	TOTAL	117.50	08.50	08.50	134.50

III. TRAINING AND TECHNICAL SUPPORT TO ANGORA RABBIT BREEDERS, NGOs, SELF HELP GROUPS (SHGs) AND EXTENSION WORKERS

(Rs. in Lacs)

S.N.	Item of Expenditure	1 st Year	2 nd Year	3 rd Year	Total
1.	<p>Training in angora rabbit breeding and rearing- 25 trainees per training for 10 days. Total 2,000 trainees in 3 years @ Rs. 1,500.00 per trainee with the provision of training material, literature, lodging/boarding, traveling, etc.</p> <ul style="list-style-type: none"> • 1st year- 250 trainees @ Rs. 1500.00 • 2nd year- 350 trainees @ Rs. 1500.00 • 3rd year- 400 trainees @ Rs. 1500.00 	03.75	05.25	06.00	15.00
2.	<p>Honorarium to resource person for assistance in training programme @ Rs. 1,50,000.00 per year</p>	01.50	01.50	01.50	04.50
3.	<p>Lodging/boarding and traveling to resource person @ Rs. 50,000.00 per year</p>	00.50	00.50	00.50	01.50
4.	<p>Visit of scientists at village level units to provide technical support to angora rabbit breeders, NGOs, Self Help Groups (SHGs), etc. @ Rs. 1,00,000.00 per year</p>	01.00	01.00	01.00	03.00
5.	<p>Provision of medicines & minerals to provide angora rabbit units @ Rs. 1,50,000.00 per year</p>	01.50	01.50	01.50	04.50
	TOTAL	8.25	9.75	10.5	28.50

IV. TO TAKE UP ACTIVITIES RELATED TO EXTENSION AND DISTRIBUTION OF ANGORA RABBIT UNITS TO FARMERS HOUSEHOLDS

(Rs. In Lacs)

S.N.	Item of Expenditure	1 st Year	2 nd Year	3 rd Year	Total
1.	<p>Supply of foundation stock to establish 2,000 rabbit units at field @ 12 rabbits (8f + 4m) per unit @ Rs. 750.00 per rabbit, i.e. 75% of cost of the rabbits</p> <ul style="list-style-type: none"> • 250 units in 1st year with 12 rabbits in one unit @ Rs. 750.00 per rabbit • 350 units in 2nd year with 12 rabbits in one unit @ Rs. 750.00 per rabbit • 400 units in 3rd year with 12 rabbits in one unit @ Rs. 750.00 per rabbit 	22.50	31.50	36.00	90.00
2.	<p>Replacement of males at each unit from 2nd year</p> <ul style="list-style-type: none"> • 250 rabbits in 1st year @ Rs. 750.00 per rabbit • 350 rabbits in 2nd year @ Rs. 750.00 per rabbit • 400 rabbits in 3rd year @ Rs. 750.00 per rabbit 	01.875	02.625	03.00	07.50
3.	<p>Supply of rabbit cages @ Rs. 2,400.00 for 24 cages, i.e. 75% of cost of the 24 cages</p> <ul style="list-style-type: none"> • 250 units in 1st year @ Rs. 2,400.00 • 350 units in 2nd year @ Rs. 2,400.00 • 400 units in 3rd year @ Rs. 2,400.00 	06.00	08.40	09.60	24.00

4.	<p>Supply of feeders and water pot @ 24 pots to each unit @ Rs. 10.00 per pot</p> <ul style="list-style-type: none"> • 250 units in 1st year @ Rs. 240.00 per unit • 350 units in 2nd year @ Rs. 240.00 per unit • 400 units in 3rd year @ Rs. 240.00 per unit 	00.60	00.84	00.96	02.40
5.	<p>Transportation of angora rabbits and cages from germplasm center and procured from different sources to distribute 1,000 units in three years</p>	01.00	01.50	02.00	04.50
6.	<p>Assistance for construction of shed for 50 animals to the beneficiaries attaining the target of 50 angora rabbits after completion of one year (approximate 50% of the total beneficiaries every year) @ Rs. 10,000.00 to the each beneficiary in the form of shed material, i.e. 50% of shed cost</p> <ul style="list-style-type: none"> • 50 % of 250 units = 125 units in 1st year @ Rs. 10,000.00 per unit • 50 % of 350 units = 175 units in 2nd year @ Rs. 10,000.00 per unit • 50 % of 400 units = 200 units in 2nd year @ Rs. 10,000.00 per unit 	12.50	17.50	20.00	50.00
7.	<p>Provision of bageshwari charkha for spinning of angora wool at household level by the beneficiaries (@ 75% subsidy, i.e. Rs. 900.00 per charkha). Approximate 100 charkhas per year @ Rs. 900.00 per year</p>	00.90	00.90	00.90	02.70

8.	Manpower and staff input for project implementation and supervision of field units in different clusters for NGOs and Self- Help Groups @ 10% of item No. 1 to 7	4.54	6.33	7.25	18.12
9.	Administrative expenses, printing & stationery, postage & telegram, photostat & xerox, telephone & fax, fuel and maintenance of vehicle, visitors entertainment, reporting, audit and other miscellaneous expenses for NGOs and Self- Help Groups @ 5 % of item No. 1 to 7	2.27	3.16	3.62	9.05
10.	TA/DA and vehicle hire to field and extension staff for frequent field visits, unit supervision, organizing the trainings, wool collection, out of station visits, etc. for NGOs and Self- Help Groups @ 5% of item No. 1 to 7	2.27	3.16	3.62	9.05
	TOTAL	54.455	75.915	86.95	217.32

V. ESTABLISHMENT OF FEED MANUFACTURING UNIT FOR CONCENTRATE AND QUALITY FEED PRODUCTION FOR ANGORA RABBITS

(Rs. In Lacs)

S.N.	Item of Expenditure	1 st Year	2 nd Year	3 rd Year	Total
i.	Non- Recurring Expenses				
1.	Construction cost of work shed for installation of feed plant and feed storage room including transportation, hill freight & cartage, etc.	02.50			02.50
2.	Feed plant for production of standard quality feed for rabbits at germplasm resource center as well as for the existing and proposed new units under the project	05.00			05.00
3.	Working capital/ revolving fund for purchasing of raw material to manufacture the feed	02.50			02.50
	SUB- TOTAL	12.50			12.50
ii.	Recurring Expenses				
4.	Manpower and labour to carrying out the feed manufacturing work at feed manufacturing unit @ Rs. 1,00,000.00 per year	01.00	01.00	01.00	03.00
5.	Administrative overheads for feed manufacturing unit for printing & stationery, postage & telegram, photo state & xerox, telephone & fax, visitors entertainment, audit, miscellaneous expenses, etc. @ Rs. 50,000.00 per year	00.50	00.50	00.50	01.50
	SUB- TOTAL	01.50	01.50	01.50	04.50
	TOTAL	14.00	01.50	01.50	17.00

VI. TO SET UP COMMON FACILITY CENTER FOR CARDING, BLENDING, SPINNING, WEAVING, KNITTING AND PROCESSING OF RAW ANGORA WOOL IN TO YARN AND HAND MADE FINISHED PRODUCTS AND TECHNOLOGICAL INPUT FOR UPGRADING THE TRADITIONAL LOOMS, CHARKHAS AND PRODUCTION AND PROCESSING EQUIPMENTS AND MACHINERIES, CHEAPER CAGE MAKING, LOW COST HOUSING

(Rs. In Lacs)

S.N.	Item of Expenditure	1 st Year	2 nd Year	3 rd Year	Total
i.	Non- Recurring				
1.	Plant & Machinery and production and processing equipments to provide common facilities to the artisans/craft persons for two common facility centers- Cost of improved charkhas, new model charkhas, handlooms, semi-automatic looms, jacquard looms, warping drums, semi- automatic flat knitting machines, mini carding/ blending plant, washing, dyeing, drycleaning plant, hydro extractor, flat belt press, flat work ironer, up steam press, boiler, etc. Lump-sum provision for plant and machineries.	20.00			20.00
2.	Construction cost of workshed and storage structures including transportation and hill freight & cartage, etc.	20.00			20.00
3.	Contingencies @ 10% of item No. 1 + 2	04.00			04.00
	SUB- TOTAL	24.00			24.00
ii.	Recurring Expenses				
4.	Water and electricity @ Rs. 50,000.00 per year	00.50	00.50	00.50	01.50
5.	Labour and manpower @ Rs. 5,00,000.00 per year	05.00	05.00	05.00	15.00
6.	Miscellaneous expenses @ Rs. 50,000.00 per year	00.50	00.50	00.50	01.50
	SUB- TOTAL	06.00	06.00	06.00	18.00
	TOTAL	30.00	06.00	06.00	42.00

VII. TO SET UP FACILITIES FOR PRODUCT DEVELOPMENT, DESIGN DEVELOPMENT AND PRODUCT DIVERSIFICATION

(Rs. in Lacs)

S.N.	Item of Expenditure	1st Year	2nd Year	3rd Year	Total
1.	To set up facilities for product development, design development, product diversification and other infrastructural supports like construction of design center, computer unit for designing development, designing equipment, designing software, plotter, trainings, manpower and staff support, overhead expenses, etc. to provide designing inputs and trainings to NGOs and local artisans/producer in consultation and support with NIFT, NID and other freelance designers	15.00	10.00	10.00	35.00
	TOTAL	15.00	10.00	10.00	35.00

VIII. RESEARCH AND DEVELOPMENT (R & D) FOR USE OF VEGETABLE AND NATURAL DYES

(Rs. In Lacs)

S.N.	Item of Expenditure	1st Year	2nd Year	3rd Year	Total
1.	Dyeing machines, stainless steel vessels, steel vats, dyeing steel rods, copper vessels, buckets, tubs, counter balance, drying shed racks, big racks for yarn, small racks for colour and dyes, steel almirah, table, chairs, essential tools, construction of work shed including transportation, hill freight and cartage, vegetable dyes, meptical, bases, soda and other chemicals, manpower and staff support, overhead expenses for this activity, etc.	10.00	05.00	05.00	20.00
	TOTAL	10.00	05.00	05.00	20.00

IX. PRODUCTION AND MARKETING PROGRAMME**(Rs. In Lacs)**

S.N.	Item of Expenditure	1st Year	2nd Year	3rd Year	Total
i.	Non- Recurring Expenses				
1.	Construction cost of 5 shilp emporiums @ Rs. 25,00,000.00 Lacs each including cost of land and site development, transportation, hill freight & cartage	125.00			125.00
2.	Construction of one central shilp emporium @ Rs. 100.00 Lacs including land	1.00			1.00
3.	Furniture and fixture for 5 show rooms @ Rs. 1,00,000.00 Lacs per emporium	05.00			05.00
4.	Furniture and fixture for Uttarakhand Shilp Emporium @ Rs. 5,00,000.00 Lacs	05.00			05.00
5.	Purchase of vehicle for production and marketing operations @ Rs. 7,50,000.00	07.50			07.50
	SUB- TOTAL	143.50			143.50
ii.	Recurring Expenses				
6.	Expenses on advertisement and publicity to popularize the angora woolen products in the domestic market as well as International @ Rs. 1,00,000.00 per year	01.00	01.00	01.00	03.00
7.	Marketing consultancy to the consultants for business promotion and to get orders from domestic as well as international market @ Rs. 1,00,000.00 per year	01.00	01.00	01.00	03.00
8.	Market simulations, participation in exhibitions and trade fairs organized by Government and Non- Government Agencies. Exhibition expenses i.e. lodging/boarding of staff, transportation of products to the exhibitions, exhibition fee etc. @ Rs. 5,00,000.00 per year	05.00	05.00	05.00	15.00

9.	Organizing the exhibitions in different places for NGOs, craft persons and artisans to promote the sale. Expenses for tenting arrangements, making sale counters, traveling and lodging/boarding to the participants, cartage of products to participants, etc. @ Rs. 15,00,000.00 per year	15.00	15.00	15.00	45.00
10.	Sales man for 5 shilp emporium. 2 Sales man for each emporium @ Rs. 3,000.00 per month each	03.60	03.60	03.60	10.80
11.	Marketing Executives- 4 Nos. @ Rs. 5,000.00 per month each	02.40	02.40	02.40	07.20
12.	TA/DA to marketing staff for marketing operations @ Rs. 2,50,000.00 per year	02.50	02.50	02.50	07.50
13.	Contingencies and miscellaneous expenses @ Rs. 1,00,000.00 per year	01.00	01.00	01.00	03.00
	SUB- TOTAL	31.50	31.50	31.50	94.50
	TOTAL	175.00	31.50	31.50	238.00

X. TRAININGS, SKILL UPGRADATION AND HUMAN RESOURCE DEVELOPMENT

(Rs. in Lacs)

S.N.	Item of Expenditure	1st Year	2nd Year	3rd Year	Total
1.	<p>Training fund - 5% of total project cost. The training fund will be utilized to organized short term and long-term trainings to the NGOs, SHGs, beneficiaries, producers, artisans, etc. in:</p> <ul style="list-style-type: none"> • Spinning, weaving and knitting • Skin/Pelt processing • Dyeing and finishing • Designing development • Use of natural dyes • Raw material for trainings • Stipend and traveling to trainees • Printing, stationeries, training literatures, etc. • Honorarium and cost of trainers/resource persons • Exposure tours and visits • Technical consultancy • Meetings, workshop, seminars • Training equipments • All the unforeseen activities related to trainings and human resource development. 	43.62	07.71	07.87	59.20
	TOTAL	43.62	07.71	07.87	59.20

XI. INFRASTRUCTURE DEVELOPMENT

(Rs. in Lacs)

S.N.	Item of Expenditure	1 st Year	2 nd Year	3 rd Year	Total
1.	Infrastructure fund - 10% of total project cost. Infrastructure fund will be spend on: <ul style="list-style-type: none">• Cost of land and site development• Protection work• Construction of training center• Construction of production center• Storage structures for feed, wool, products, etc.• Work shed for R & D work• Office infrastructure• Technology resource centre• Furniture and fixtures• Computers, printers, fax, photocopier,• LCD projectors and training equipments• Vehicles for field operation• Other necessary infrastructures facilities required for implementation of project	87.233	15.415	15.746	118.394
	TOTAL	87.233	15.415	15.746	118.394

XII. REVOLVING FUND

(Rs. in Lacs)

S.N.	Item of Expenditure	1 st Year	2 nd Year	3 rd Year	Total
1.	Revolving fund- 5% of total project cost. The revolving fund will be utilized for: <ul style="list-style-type: none">• Purchase of angora wool from the beneficiaries• Purchase of lambs/merino wool to blend with angora wool• Purchase of angora yarn from the beneficiaries• Purchase of angora garments from the beneficiaries• Spinning, weaving and knitting wages Carding and blending wages• Dyeing and finishing wages	43.62	07.71	07.87	59.20
	TOTAL	43.62	07.71	07.87	59.20

**XIII. CO- ORDINATION, SUPERVISION, MONITORING & EVALUATION,
IMPACT ANALYSIS AND ASSESSMENT**

(Rs. in Lacs)

S.N.	Item of Expenditure	1st Year	2nd Year	3rd Year	Total
1.	Co- ordination and networking with Government Department, NGOs, Research Institutes, Designing and Marketing Organizations, beneficiaries, etc.	00.50	00.50	00.50	01.50
2.	Organizing of meetings, workshops and seminars	01.00	01.00	01.00	03.00
3.	Monitoring and evaluation	00.50	00.50	00.50	01.50
4.	Record keeping and data processing	00.50	00.50	00.50	01.50
5.	Liaison with concern departments and agencies	00.50	00.50	00.50	01.50
6.	Impact analysis and assessment	00.50	00.50	00.50	01.50
7.	Mobility, traveling and conveyance	05.00	05.00	05.00	15.00
8.	Overhead expenses and contingencies	02.50	02.50	02.50	07.50
9.	Computer & hardware, photocopier and other office equipments	05.00			05.00
	TOTAL	16.00	11.00	11.00	38.00

XIV. PROJECT ADMINISTRATION, STAFF INPUT, MOBILITY, TRAVELING AND CONVEYANCE, OVERHEAD EXPENSES, CONTINGENCIES.

(Rs. in Lacs)

S.N.	Item of Expenditure	1 st Year	2 nd Year	3 rd Year	Total
1.	PERSONNEL EXPENSES AND STAFF INPUT				
a.	Man Power and Staff Input for Rabbit Farming, Training and Extension Section				
i.	Coordinators/Veterinary Officers- 2 @ Rs. 10,000.00 Per Month	02.40	02.40	02.40	07.20
ii.	Assistant Coordinators- 4 @ Rs. 5,000.00 Per Month	02.40	02.40	02.40	07.20
iii.	Field Supervisors- 10 @ Rs. 3,000.00 Per Month	03.60	03.60	03.60	10.80
b.	Man Power and Staff Input for Design Development Section				
i.	Coordinators- Design Development- 1 @ Rs. 10,000.00 Per Month	01.20	01.20	01.20	03.60
ii.	Technical Assistants- 2 @ Rs. 5,000.00 Per Month	01.20	01.20	01.20	03.60
c.	Man Power and Staff Input for Vegetable and Natural Dye Section				
i.	Coordinators- Vegetable Dyes- 1 @ Rs. 10,000.00 Per Month	01.20	01.20	01.20	03.60
ii.	Technical Assistants- 2 @ Rs. 5,000.00 Per Month	01.20	01.20	01.20	03.60
d.	Man Power and Staff Input for Production and Quality Control Section				
i.	Manager- Production- 1 @ Rs. 10,000.00 Per Month	01.20	01.20	01.20	03.60
ii.	Production Supervisors- 2 @ Rs. 5,000.00 Per Month	01.20	01.20	01.20	03.60
iii.	Instructors- Spinning- 4 @ Rs. 4,000.00 Per Month	01.92	01.92	01.92	05.76
iv.	Instructors- Weaving- 4 @ Rs. 4,000.00 Per Month	01.92	01.92	01.92	05.76
v.	Instructors- Knitting- 4 @ Rs. 4,000.00 Per Month	01.92	01.92	01.92	05.76

e.	Man Power and Staff Input for Marketing Section				
i.	Manager- Marketing- 1 @ Rs. 10,000.00 Per Month	01.20	01.20	01.20	03.60
ii.	Assistant Manager- Marketing- 2 @ Rs. 5,000.00 Per Month	01.20	01.20	01.20	03.60
f.	Man Power and Staff Input for Administration and Accounts Section				
i.	Project Leader- 1 @ Rs. 25,000.00 Per Month	03.00	03.00	03.00	09.00
ii.	Administrative-cum-Accounts Officer- 1 @ Rs. 15,000.00 Per Month	01.80	01.80	01.80	05.40
iii.	Accountants- 2 @ Rs. 7,500.00 Per Month	01.80	01.80	01.80	05.40
iv.	Data Entry Operators- 2 @ Rs. 3,000.00 Per Month each	00.72	00.72	00.72	02.16
v.	Drivers- 1 @ Rs. 3,000.00 Per Month	00.36	00.36	00.36	01.08
vi.	Attendants/Messengers- 2 @ Rs. 2,500.00 Per Month each	00.60	00.60	00.60	01.80
	SUB-TOTAL	32.04	32.04	32.04	96.12
2.	MOBILITY				
i.	Traveling and Conveyance	02.00	02.00	02.00	06.00
ii.	Fuel for Vehicle	00.75	00.75	00.75	02.25
iii.	Vehicle Repair and Maintenance	00.50	00.50	00.50	01.50
	SUB-TOTAL	03.25	03.25	03.25	09.75
3.	OVERHEAD EXPENSES				
i.	Printing and Stationery	01.00	01.00	01.00	03.00
ii.	Postage and Telegram	00.25	00.25	00.25	00.75
iii.	Telephone and Fax	01.00	01.00	01.00	03.00
iv.	Photostat and Xerox	00.50	00.50	00.50	01.50
v.	Visitors Entertainment	00.25	00.25	00.25	00.75
vi.	Water and Electricity	00.50	00.50	00.50	01.50
vii.	Internal Audit	00.25	00.25	00.25	00.75
viii.	Miscellaneous Expenses/ Contingency	01.50	01.50	01.50	04.50
	SUB-TOTAL	05.25	05.25	05.25	15.75
	TOTAL	40.54	40.54	40.54	121.62