

Chapter - 5

DEVELOPMENT OF ANIMAL HUSBANDRY, SMALL SCALE & COTTAGE INDUSTRY AND SERICULTURE IN THE HILL AREAS OF DARJEELING DISTRICT.

The integration of animal husbandry practices with crop husbandry inflates the level of income and employment. The setting up of local resource-based small-scale & cottage industries along with sericulture practices also offers a large scope of employment and generates income in the hands of unemployed and underemployed.

So, development in the sense of local initiative and self-help gets very much large support from them. Considering this view in this chapter an attempt has been made to discuss the extent of development of animal husbandry, small-scale & cottage industry and sericulture practices in the rural areas of the hill region of Darjeeling district since independence.

5.1 Animal Husbandry:

There were four veterinary hospitals with four veterinary assistant surgeons at Darjeeling, Ghum, Kurseong and Kalimpong before independence in the hill areas of Darjeeling district for treating non-contagious diseases and wounds of animals. For the prevention and control of infectious diseases there was one itinerant veterinary assistant surgeon in each of the hospitals at Kurseong, Kalimpong and Ghum. Besides there were an assistant

superintendent and a glanders inspector attached to the veterinary vaccine establishment at Kurseong for examining pathological specimens and preparation of rinderpest vaccine and other biological products. Each veterinary hospital would treat about 1,500 to 2,000 animals as out-patients and 300 to 400 animals as in-patients in the course of a year. Itinerant veterinary assistant surgeons would also treat a large number of animals and carry out propaganca on the precautions against epidemics. The four officers were under the sole control of the Provincial Government but the others were under the dual control of the District Board and the Provincial Government.¹

The officers mentioned above were observed to work in close co-operation with the Darjeeling Himalayan Society for the prevention of cruelty to animals. The society was organised in 1917 and impelled by the energy of Mrs. Lennox and her daughter, both of Ghumti Tea Estate. It continued effectively to prevent cruelty to animals and to secure them proper treatment and better conditions. There were an infirmary for sick and injured animals in Darjeeling and hospitals at Ghum, Kurseong and Kalimpong and dressing stations at Mirik, Pankhabari and Sukhiapokri on the Nepal frontier. It also devised a pack pony saddle, based on the army model but costing only a small sum within the reach of the poorest.²

Besides, it is mentionable here that in the year 1891, Kalimpong mela, an annual agricultural and livestock exhibition was started by Dr. Graham. It would show the way to many improvements and had made Kalimpong the headquarters of departmental demonstrations not only of the hill areas but also of Darjeeling district as a whole.³

The hill areas of Darjeeling district is on the whole a favourable area for the development of livestock on a commercial basis and for industries making animal products. As because of this fact a number of farms under individual control were well established in this area. Among these farms Keventer's farm at Ghum was prominent. This farm was started in a very small way in the late 90's by Mr. Edward Keventer, a Swede, who had already farms in Calcutta, Delhi, Aligarh and Simla. In the early stage of its development a few Siri cows and a few yaks were kept there. But, since 1924 the farm began to develop rapidly. Modern cattlesheds were built, up-to-date dairy machinery was installed and the farm became able to produce first class pasturised milk. In the year 1935 a modern pig farm was started in conjunction with the dairy. English Middle White Pigs and Australian Large White Pigs were imported in this year. About 1947, it had 200 cows and several hundred pure-bred English and Australian Pigs. It was also observed to breed its own cattle and pigs and to supply daily large quantities of pure pasturised milk, excellent farm butter, cheese, ham, bacon, pork and sansages. Having over

200 cows and several hundred pure-breed English Pigs. pedigree bulls and boars were frequently imported by the farm.⁴

Thus it is clear that before independence almost no governmental measure was adopted to improve animal husbandry in the hill areas of Darjeeling district except the provision of veterinary aid. And again, there was no practice of animal husbandry from the commercial view point among the hill people except some farms like Keventer's farm organised by private ownership.

But after independence attempts have been made in a co-ordinated manner for the development of animal husbandry practices among the people of the hill areas on the commercial basis for augmenting their income through the utilization of their leisure in this activity by the Central and State Governments. The developmental work relating to animal husbandry in this region after independence consists of the following programmes:

- (i) Cattle Development,
- (ii) Piggery Development,
- (iii) Poultry Development,
- (iv) Development of Sheep Rearing,
- (v) Development of Veterinary Services.

5.1.1. Cattle Development Programmes:

Cattle Development Programmes in the hill areas of Darjeeling district since independence were composed of :

- (a) measures to improve quality of breeds,
- (b) measures to improve fodder supply,
- (c) measures to improve milk marketing.

5.1.1. (a) Measures to improve quality of breeds:

In the past, i.e., before independence, cross fertilisation of cattle with improved breeds was introduced in the hill areas of this district by the farms, owned privately like Keventer's farm at Ghum, missionaries and others. After independence, during the years 1956-1961, a scheme to upgrade local stock with Jersey strain, through artificial insemination was introduced covering a number of places in Darjeeling and Kalimpong subdivisions. In the year 1963-64, a new scheme, namely, Hill Cattle Development Scheme was undertaken with the objective of intensive and extensive implementation of artificial insemination with Jersey strain for upgradation of local stock.⁵

Under this scheme, one central semen collection station and two A. I. (Artificial Insemination) centres with nineteen sub-centres were set up in order to provide necessary infrastructure for raising the quantity of qualitative stock of cattle in the hill areas during 1963-1974.⁶

But a majority of interior villages till then were not covered with this scheme. For raising the genetic progeny of the cattle stock mostly in the villages, supply of infrastructure was tried to be expanded by opening more main A. I. centres and

A.I. sub-centres in the hill areas after 1974 under the Accelerated Hill Development Programme. Under this programme one additional central semen collection station, six A.I. main centres and fifty two A.I. sub-centres were established during 1974-81.

However, a large number of villages were out of the reach of the facilities provided with A.I. sub-centres. For the hilly terrain and unsatisfactory road communication it was difficult to reach the remote rural areas with biological products. As such upgrading work was taken up by placing improved bulls in the selected rural areas for taking up natural services. In order to satisfy this demand one heifer as well as bull rearing unit was established in the hill areas in the year 1974-75.⁷

Thus from the above analysis it is evident that since independence for the upgradation of genetic progeny of the cattle stock in the hill areas, one heifer-cum-bull rearing unit, two central semen collection stations, eight main A.I. centres and seventy-one A.I. sub-centres were opened upto the year 1981.

In this context it should be mentioned that one A.I. sub-centre can work efficiently utmost within the range of five kms, if and only if there remains an efficient system of communication. So in respect of the hill areas of Darjeeling district, due to its inefficient communication system and disorderly location of the villages, seventy-one A.I. sub-centres are not sufficient to raise the quality of cattle stock in all the villages. Also,

one heifer-cum-bull rearing unit is not capable of supplying the bulls in accordance with their demand for the desired level of upgradation of the cattle stock. So, in this area more central semen collection stations, A.I. main centres, A.I. sub-centres and heifer-cum-bull rearing units should be established in the near future.

5.1.1(b) Measures to improve fodder supply:

Cattle development is intimately connected with the expansion of fodder cultivation and its supply. Before independence cattle stock in the hill areas was fed with natural fodder from the forest and crop residues of cultivated cereals like paddy, maize, wheat etc.

But it was realised that nutritional requirement of a high yielding milch cow could not be fully satisfied with the fodder only from forest and crop residues. For the scarcity of cultivable land in the hill areas, it is not desirable to bring large areas under independent fodder crops. However after independence the following measures were taken with a view to raising the supply of qualitative fodder to the hill people.

(i) Seed multiplication-cum-fodder demonstration farms were established in each block of the hill areas during 1951-1981. The total number of such farms in the hill areas were ten till 1981. Among them two at Pedong and one at Algarh of Kalimpong sub-division, were established during 1951-1961.⁸

(ii) Improved varieties of fodder seeds and cuttings were begun to be distributed to the farmers at subsidised rates since 1961.⁹

(iii) Improved varieties of fodder seeds, fodder demonstration plots, chaff-cutter, silopits etc were started to be distributed since 1976-1977.¹⁰

(iv) Five hundred fodder demonstration plots spread all over the area were established during 1976-1981.¹¹

(v) Two feed mixing units were set up in Kalimpong and Kurseong respectively during 1974-1977 in order to cater to the feed requirement of the animals of the farmers in the hill areas of Darjeeling district.¹² The measures, furnished above, developed fodder position remarkably after independence.

5.1.1.(c) Measures to improve milk marketing:

Integral to cattle development programme is to set up an efficient market mechanism, which ensures fuller utilization of the existing production level through remunerative prices and linked inputs. In the period before independence two attempts were taken in this field.

In the year 1930, the Darjeeling Milk Union with societies at Sukhiapokhri, Rungbull, Dilram and Sonada was established. The societies were supplied with cream separators and the union would market milk and butter. But the union ceased to function after

five years of its inauguration due to economic non-viability. A second attempt was made during the Second World War under the leadership of one Swaraj Bose. In this time no separate milk societies were set up, but the milk was being procured through the existing primary credit societies. The co-operative received no financial assistance from the Government or credit from the banks and this venture also collapsed within three years of its establishment.¹³

After independence the Himalayan Milk Producer's Co-operative Union was set up under Operation Flood-1. The union's operational area covered whole of the Darjeeling district and parts of the neighbouring districts namely, Jalpaiguri and West Dinajpur. Till the year 1980, under the leadership of the union the following activities were performed:

(i) A 60,000 LPD Dairy Plant with 10 M.T. per day milk drying capacity was established at Matigarah of Siliguri subdivision of Darjeeling district.

(ii) Six chilling centres each with a capacity varying from 2000-4000 litres per day (LPD) totalling 15,000 to 20,000 LPD were installed.

(iii) Organisation of 500 village Milk Producer's Co-operative Societies (MPCS) were attempted to be affiliated to a District Co-operative Milk Producers Union. Relating to this context the year-wise progress of this union in the case of hill areas of Darjeeling district is furnished in Table 5.1.

(iv) In order to enhance milk production a technical input drive programme, comprised with the sub-programmes, namely, animal health care, artificial insemination service, balanced cattle feed, fodder seeds and dairy extension services to the milk producers was implemented by the union through the village co-operatives. About 1,50,000 milch animals were envisaged as being brought within the co-operative ambit.

(v) Suitable milk procurement and marketing infrastructure were created.¹⁴

Thus the establishment of the Himalayan Milk Producers' Co-operative Union has brought about a major improvement in milk marketing by providing remunerative prices to the producers. The producers have been assisted in freeing themselves from the clutches of intermediary interests and received through a primary co-operative network quality based prices that are more than three times in excess of what they have received from intermediaries prior to the setting up of the union. Besides, the programmes for breed improvement, animal health coverage, utilization of semen technology for breed improvement, provision of linked inputs of concentrated cattle feed, extension services, training of animal husbandry workers etc. raised the quality of the livestock and the volume of milk production of the farmer members of the MPCCs in the hill areas of Darjeeling district.¹⁵

But the functioning of the union in the hill areas is confronted with various problems as outlined below:

The first and the most important problem is the cow fat and s.n.f. content in the milk produced. From a study, undertaken independently by the union in mid 1978 on producers' animals selected randomly in different locations in the hill areas, it was revealed that the average fat and s.n.f. contents were 3.77 per cent and 7.7 per cent respectively. For this it was difficult to determine quality limits for the purchase of milk without penalizing the producers unfairly. Again, it imposed a burden on the union for reconstituting the milk to acceptable standards under P.F. Act before marketing the milk. Random experiments conducted by the union indicated that low standards of fat was due to the wholetime confinement in stalls. When the animals were regularly exercised, the percentage of fat improved perceptibly. However, this remedial measure will not be feasible in most of the societies for the topographical difficulties in the hill areas of Darjeeling district.¹⁶

The second major problem confronted by the union is related to the cost of transportation of milk. The milk is usually transported by head-load from the societies to the reach-point, from where milk is collected by hired motor vehicles and brought to the chilling plants. After the completion of chilling operation it is further transported by motor vehicles to the dairy located

in the foothills. For the hill contour, four wheeled Jeeps or Landrovers have to be engaged for the first phase of transportation of milk from the societies to the chilling plants. This raises the cost of transportation. During the year 1977-78, the union incurred a cost of Rs. 0.06 per litre on head load charges and Rs. 0.25 per litre on motor transport. In these days of rising prices of fuel, this huge cost of transportation is likely to go up further unless the chilling stations in the hill areas of Darjeeling district are converted into mini-dairies, where separation, pasteurisations and packaging of milk can be done.¹⁷

Despite the problems outlined above there is enthusiasm and hope among the members of the societies. A few societies are procuring 500-800 litres of milk per day. Some of the societies in Peshok, Darjeeling sub-division have done well enough to buy their own Jeep for transporting milk. Another in the village of Chottapobong, Darjeeling sub-division has been able to set up a school, library and knitting centre out of the funds generated by the Milk Producers Co-operative Society.¹⁸

5.1.2. Piggery Development Programme:

There is a good demand for the meat of pig in the hill areas of Darjeeling district. The conversion of feed into meat by pigs is much better in the cool climate of the hills than in the torrid weather of the plains. It was observed in the period before independence that pigs were not numerous in the rural areas

of the hill region and were only reared by a limited number of castes namely, Mangars, Rais, Limbus, Tamangs, Lepchas and Bhutanese, in insanitary conditions mainly for meeting family requirements. Besides, at that time, there were some piggeries in the hill areas and in the district as a whole, breeding from imported Yorkshire and Berkshire animals and some of these piggeries were observed to maintain adequate sanitary precautions. But in this period there was not observed any attempt from the Government's part to develop and popularise pig rearing in the rural belts of the hill areas of Darjeeling district.¹⁹

After independence during 1956-1961, i.e., during the Second Five-Year Plan period six pig-rearing units were set up in different locations of Darjeeling district including the hill areas of the district with funds allotted by the 'Tribal Welfare Department'. Besides, a bigger pig breeding farm was established at Dungra in Kalimpong sub-division, from where improved varieties of piglets were made available to the farmers for stock upgradation.²⁰

Since the inception of the Fifth Five-Year Plan, i.e., since 1974, the year of formation of the Accelerated Hill Development Council, much emphasis was given on improving the breedable stock of pigs in the hill areas under the 'Accelerated Hill Development Programme', guided by the said council. With a view to satisfying this objective ten exotic pig farms were established in different blocks of the hill areas and from these farms it was

begun to distribute improved varieties of piglets among the target groups. It was sought thereby to generate surplus income in the hands of the target groups by enabling them to sell improved cross-breed varieties of pigs. Again, in order to develop market mechanism of pigs, a processing-cum-backon factory was set up at Kalimpong by the West Bengal Livestock Processing Developing Corporation. This factory purchases improved varieties of pigs from the target groups according to the body weight per pig and processes a portion of meat to manufacture pork products and sells the remainder as green meat within the hill areas.²¹

These programmes since independence in this field, has popularized pig rearing in the hill areas of Darjeeling district to a very great extent and for this pig population has become much higher than that before independence.

5.1.3. Poultry Development Programme:

The hill areas of Darjeeling district have the potentialities of developing poultry farming as an employment-oriented commercial project for the small and marginal farmers. The climate and other factors of the hill areas make conditions for poultry development schemes highly encouraging and the achievement so far in this direction is quite impressive. The reason behind the popularity of poultry keeping in the hill areas is largely due to the quick returns without involving any great risk or large capital involvement.

Before independence two kinds of indigenous domestic fowls namely Sikkimay and Syakinay were observed to be domesticated for the family needs in the hill areas of Darjeeling district. White Leghorns, Black Minorcas and Rhode Island Reds were imported by a number of persons interested in poultry farming but it was delicate, not entirely suitable for local conditions and susceptible to diseases. But this period showed no evidence of undertaking any programme of development of poultry farming on the commercial basis in the hill areas by the then Government or any other agency sponsored by the Government.²²

In the earlier years of independence, during the First (1951-1956) and Second (1956-1961) Five-Year Plans a total of 4,668 poultry birds-Rhode Island Red and White Leghorn were distributed at different places of Darjeeling district including hill areas for the upgradation of poultry stock. It was the period of the Third Five-Year Plan (1961-1966), since when poultry keeping received considerable impetus in the hill areas of Darjeeling district. From this time intensive poultry development work through the supply of improved varieties of exotic breeds regularly in the selected areas of the hill region was undertaken. This assured reasonable returns to the poultry keepers.²³

Onward seventy's, the Small Farmers' Development Agency (SFDA) within the Fourth Five-Year Plan period (1969-74) had undertaken steps to popularise the poultry schemes as an alternative occupation among the small and marginal farmers. Moreover, the

agency had negotiated to co-operative institutions and other institutions concerned with profitable marketing of the poultry products in this area. After the beginning of 'Accelerated Hill Development Programme', under the supervision of "Accelerated Hill Development Council", i.e., since the beginning year of the Fifth Five-Year Plan (1974-1979), three poultry farms at Darjeeling, Kalimpong and Kurseong respectively were established by the Animal Husbandry Department of the Government of West Bengal in order to distribute chick, table eggs and birds among the target groups. Besides, within the above mentioned period, i.e., 1974-1979 a poultry co-operative was set up in Kurseong for improving the market mechanism of poultry products under the guidance of "Accelerated Hill Development Council".²⁴

In spite of the above-mentioned schemes poultry farming in the hill areas has not arrived at the desired level of development till the end of the Fifth Five-Year Plan, i.e., 1979 due to unavailability of regular supply of balanced feed, lack of attention towards health-care, which are also aggravated by the problems of transport and communication in respect of interior villages in the hill areas of Darjeeling district. Therefore, poultry keeping can be successful only if it is practised in a more scientific and efficient manner than that at present, through the supply of linked inputs, like, balanced feed and health care etc.

5.1.4 Sheep Rearing Programme:

Sheep rearing programme has enormous importance in the economy of the hill areas of Darjeeling district. It is an important occupation of a section of the hill people. It has been popular among the small and marginal farmers and the agricultural labourers as well due to low intake and maintenance cost.

Sheep rearing although important, no emphasis was given for its development in the period before independence. Even relatively less importance was attributed on it in the period after independence. Only two sheep breeding farms at Kashone and Pedong of Kalimpong sub-division were established during the Third Five-Year Plan (1961-66).²⁵

In the absence of sufficient knowledge of modern method of elective breeding and sheering among the sheep-rearers in this area, the quality of wool obtained from the sheeps reared is inferior and yield is very low. Again lack of required emphasis on it has obstructed it's development. However, there is a large scope for the development of sheep rearing in the hill areas especially in most of the areas in Kalimpong sub-division and in some parts of Bijanbari block in Darjeeling sub-division.

5.1.5. Development of Veterinary Services:

In the earlier part of this chapter it is observed that the supply of veterinary services in the hill areas of Darjeeling

district was almost meagre under the British rule. The period after independence shows a notable change in this field. The sketch of development of veterinary services in this area of the district for the period after independence may better be presented by separating the period into two parts as in Table 5.2.

The first of these refers to the period involving the years between 1951-1966, i.e., between the First Five-Year Plan and the Third Five-Year Plan. The second refer to the period 1974-1981 during which various new developmental works relating to the strategies for intensive supply of veterinary services in the hill areas of Darjeeling district were performed under the 'Accelerated Hill Development Programmes'.

From Table 5.2, it is observed that after independence, the development programmes relating to veterinary services were taken in such a manner that the difficulties connected with transport, communication and topography of the region in the way of veterinary extension services could be outweighed. During 1951-1966, emphasis was given to extend the supply of veterinary aids and services, and to remove the inadequacy in this regard existing before independence only through setting up of a few few hospitals, dispensaries and other related institutions. But in course of time it was realised that the development of veterinary services till 1966 only through the establishment of some kinds of veterinary service institutions was not sufficient to remove its inadequacy in the face of the problems arising from the

topographic character of the region. For this under the 'Accelerated Hill Development Programmes' developmental strategy in this field was undertaken in such a manner that it was not confined only in setting up veterinary servicing institutions like hospitals, dispensaries etc. but also were taken some other completely different types of strategies, as evident from the item Nos. III, VI, VIII of the second column in the Table 5.2. As a consequence, the supply of veterinary services had become so intensive that those were available at the door steps of the livestock owners in the hill areas of Darjeeling district and the inadequacy in its supply existing till 1966 was outrightly obviated.

5.2. Small-scale and Cottage Industries and Sericulture Practices:

5.2.1. Small-scale and Cottage Industry:

Although the small-scale and cottage industries, have an immeasurable importance in the context of the economy of the hill areas of Darjeeling district, there was almost no sign of development in this respect for a long time either before or after the occupation of this area by the British.

There were some traditional village handcraft industries supplying simple needs of the local rural people before the advent of the British. The products of these handicrafts were blankets, woolen knitted articles, woven cotton and wool fabrics, kukris, various tools, pottery, bamboo products (baskets, mats, ghooms,

etc.) and ropes. The production operation of these products was hereditarily confined among a few households as cottage industries.²⁶

Under the British rule no attempt was observed in developing cottage industries and inculcating the habit of industry amongst the local people except the establishment of the Kalimpong Industrial School. The school was established by Mrs. Graham, wife of the very Rev. J.A. Graham D.D., C.I.E., in the year 1897. In the year 1924, the school was registered under the Companies Act as the Kalimpong Mission Industries Association. With the setting up of this school it was started to teach lace making among the local hill women in order to supplement their family income from agriculture. Later on, carpentry, embroidery, tailoring and carpet making were added to the school curriculum and on the eve of independence there were twelve separate departments including weaving, dying, leather craft, knitting, painting, fabric-printing and building. As a consequence of the establishment of this school, the local hill people had had an opportunity to send their children for learning various crafts and thereby entrepreneurial skill among some hill people had developed.²⁷

The period since independence registers much emphasis on developing a strong base of small-scale and cottage industries in the rural areas of the hill region of Darjeeling district. In this period attempts had been made to create an atmosphere conducive to a notable development in this field. In view of achieving the

goal government aimed at increasing the efficiency of the existing industrial units and establishing new industrial units lack of entrepreneurial skill and lack of incentives to the entrepreneurs were in this period chalked out as the major constraints in the path of development of small-scale and cottage industries in this areas. In order to remove these constraints the following strategies were undertaken in this period:

(i) Crreation of enough entrepreneurial skill:

In order to develop a sound industrial base of either type in an area, the prime requirement is to develop entrepreneurial skill among the people of the area concerned. Accordingly in the hill areas of Darjeeling district much emphasis was given on spreading technical education and training in different trades with the establishment of a number of technical educational institutes since independence. In the year 1949-50 the Industrial Training Centre/Institute at Tung was established as a joint project of the Union and State Governments on a 60 : 40 expense sharing basis, especially for the benefit of the hill people. It imparts training on some engineering trades, namely, fitters, electricians, wireman, motor-mechanics, carpenters, black-smiths etc. and some non-engineering trades like, printing machine operators, press, compositors, proof-readers, tailors, book-binders, woollen - goods weavers etc.²⁸ In addition to this institute fifteen other training centres had been set up at different blocks of the hill areas of the district during 1951-

1970 in the post-independence period. The names of these centres are:

(i) The cutlery servicing station at Kurseong to render assistance by way of heat-treatment, grinding, polishing, electro-planting, supply of modern machinery, improved raw materials, power and technical know-how to traditional artisans manufacturing tea garden implements locally.

(ii) Cane and Bamboo Training Centre at Kalimpong,

(iii) Wool and Cotton Weaving Centre at Darjeeling,

(iv) The Foot-wear Centre at Kurseong,

(v) The Carpentry Training Centres at Bijanbari, Mirik and Pedong,

(vi) The Bee-keeping Centres at Kalimpong, Relling and Bijanbari,

(vii) The Bristle Dressing and Brush-ware Training Centre at Bijanbari,

(viii) Polytechnic School at Kurseong,

(ix) Technical School at Kalimpong,

(x) Arts and Crafts Industrial Co-operative Society at Kalimpong.²⁹

Onwards 1970 no new technical education and training institute had been established due to government instruction, not to open any new training centre.³⁰

Although government has issued instruction not to open any new training centre, our experience tells whenever new scheme for industrial development has to be introduced, some types of

training are unavoidable. As far as practicable these trainings are supposed to be imparted in the regular training centres, like Industrial Training Centre at Tung and other production centres.³¹

It is worth noting that in the case of impracticability to fill up the gap of entrepreneurial skill with the help of existing set up of Technical Education and Training, the entrepreneurial skill is tried to develop by providing in plan training and education to the selected candidates at places where such training will be conducive to the development of new industries in the hill areas. Even sometimes skilled personnel are also brought from outside area to provide suitable nucleus for development. Thus in the post independence period, there has developed sufficient entrepreneurial skill in the hill areas of Darjeeling district.

(ii) Incentives to the Entrepreneurs:

Local entrepreneurs in the hill areas are extremely shy. This causes difficulties in the establishment along with the development of industries in this area. In order to overcome this bottleneck government had given incentives to the local talents in the following forms:

(a) Financial Aids to the Entrepreneurs/Industries:

Financial aids in the form of loans and subsidies were advanced to the entrepreneurs and artisans of this area by the government through the following institutions since 1951:

(i) District Industries Centres, which gives short-term, medium-term and long-term loans upto one lakh and subsidies to the entrepreneurs and artisans under 'Bengal State Aid to Industries (BSAI) Act,

(ii) West Bengal Khadi and Village Industries Board, which advances financial help to various cottage industries,

(iii) Rural Industries Project, which was launched in Darjeeling district in 1963 by the 'Planning Commission' for promoting the rural industries exclusively by giving financial help to the rural artisans,

(iv) Block Development Officer, District Industrial Officer, Deputy Commissioner/Magistrate, the Project Officer, Rural Industries Project and Registrar of Co-operative Societies are empowered to sanction loans under B.S.A.I Act. Among them B.D.O. can sanction loan upto Rs. 400.00, D.I.O. upto Rs. 2000.00 and the latter authorities can sanction it upto Rs. 10,000.00.

(v) West Bengal Finance Corporation, Siliguri branch, which serves the need for fixed capital loan requirement of industrial entrepreneurs.

(b) Establishment of Pilot Project:

In order to remove shyness of the local entrepreneurs in the hill areas and to develop new industries in this area by the local talents the Government gives initiative to them through setting up of industrial units. These units are ultimately handed over to those who are involved in the project from the very

beginning. A suitable agreement in such cases is made mainly to ensure that on the completion of the gestation period, the units handed over are paid for in easy instalments.³²

(c) Provision of Margin Money:

Various financial institutions are invited by the government to encourage local entrepreneurs by providing incentive in the form of margin money. Margin money varies from 40 per cent to 50 per cent of the total capital requirement according to the merit of the case.³³

(d) Establishment of Industrial Estates and Sheds:

Besides financial incentives the Government provides some other facilities to the entrepreneurs of the hill areas of Darjeeling district so that they can come forward to set up industries. These facilities are the establishment of industrial estates and sheds, sales emporia in suitable places of the hill areas of the district, from where the entrepreneurs can have easy transport and marketing facilities. It is worth mentioning that meanwhile big industrial estates out of state budget, three small industrial sheds with control assistance were established in different places in the hill areas of Darjeeling district. In addition to these five sales emporia of which four at Darjeeling and one at Kalimpong were set up in order to popularize the handicrafts of the hill areas and of the district as a whole.³⁴

Owing to the above strategies undertaken by the Government since independence there has taken place a breakthrough in the field of small-scale and cottage industries in the hill areas of Darjeeling district. Local resource based various small-scale and cottage industries e.g. furniture, handicraft, woodcraft, blacksmithy, shoe-making, bamboo works, wool-knitting, cane-works, tailoring, blanket wearing, etc. have been opened and run under three types of enterprise, namely, Public (Governmental), Private and Co-operative.³⁵

Although the number of small-scale and cottage industries has increased remarkably in this area, they have been suffering from the following constraints, which prevent them from smooth functioning.

There remains lack of co-ordination among the activities of the agencies/institutions, which undertake various schemes to develop new industrial units as well as to assist old ones. Owing to this fact most of the artisans, craftsman and small entrepreneurs are observed to suffer from inadequate assistance, services and especially scarce raw materials.

Relatively limited size of market poses another problem in the way of successful working of the small-scale units in the hill areas. Specially the market in the hill areas is too small and inadequate to clear up the output of these units.

Irregular supply of raw materials of some kind is a serious problem, standing opposite to the small-scale and cottage industries in the hill areas of Darjeeling district. The reason behind this is mainly the transport bottleneck in this area.

Lack of regular supply of power and credit are other retrograding factors behind small-scale and cottage industries of this area. A particular unit may have enough demand for its products but lack of regular supply of power as well as lack of sufficient funds for purchasing raw materials hinders production.

As a consequence of the problems discussed above the small-scale and cottage industries have not flourished in this area as it is desired by the Government of independent India. Therefore, in order to augment the level of employment and income of the people in the rural areas of this region through the development of small-scale and cottage industries, measures of the following types should be taken for removing the aforesaid problems:

(i) Regular supply of raw materials and reducing the cost of raw materials by linking small-scale and cottage industries of this area intensively to the locally available raw materials or to those which are not scarce and can easily be transported,

(ii) Supply of working capital as and when necessary and reduction of the cost of borrowing,

(iii) Provision of facilities for storage and marketing,

(iv) Increasing artisans' retention capacity and ensuring better returns for their products,

(v) Co-ordinating the schemes undertaken by various agencies/institution for the development of small-scale and cottage industries in the hill areas of Darjeeling district.

5.2.2. Sericulture Practice:

Sericulture is a special type of cottage industry. It is related with the cultivation of mulberry for raising silk-worms producing cocoons and with some other practices, concerned with rearing of silkworms and weaving of silk fabrics. It is a labour-intensive agro-based industry, which provides gainful supplementary employment to the rural people.

Before independence a little bit of stress was given by the Government to develop this industry. Under the British rule the credit of introducing sericulture as a subject in the school curriculum went to Mr. Southerland, Principal of the Scottish Mission Institution at Kalimpong. One of his students later started private rearing of cocoons at Kalimpong. It was, however, not until the year 1917, when positive steps were undertaken by the Government to introduce sericulture in the hill as well as in the plain areas of the district. In that year the present Kurseong Nursery was established in the hill areas of Darjeeling district to rear silkworm breeds on the basis of the recommendations of

Prof. H.M. Maxwell Letroy, who had carried on an investigation into the causes of decline of sericulture in India at the instance of the then Government of India.³⁶

In fact, the expansion of sericulture in the hill areas of Darjeeling district started significantly since independence. After independence, during the First Five-Year Plan, i.e., between 1951-55, a scheme was introduced for the expansion of mulberry cultivation in the hill areas of the district and accordingly a mulberry nursery was started at Matigara near Siliguri.³⁷

During the Second Five-Year Plan (1956-61), it was envisaged that the hill areas of the district possessing a favourable climatic condition could be utilised for rearing high-yielding exotic races of silkworm throughout the year. The same work could only be carried on during the winter season in the plains. It was further realised that the seeds of high-yielding exotic races could also be crossed with hard indigenous races and F-1 hybrids for commercial rearing. Accordingly, with financial assistance from the Central Government received through the Central Silk Board, the following three schemes were implemented in the district in order to expand sericulture in the hill as well as in the plain areas of the district during Second Five-Year Plan period (1956-61).³⁸

(1) A Foreign Race Seed Station was set up at Kalimpong, with the objective of studying the nature and feed of silk-worm

of high-yielding exotic varieties besides supplying basic layings for multiplication and evolving cross breed races suitable for summer season of the plain areas. Presently several races from Japan and European countries are being maintained at this station and one high-yielding silk-worm race suitable for summer season has already been evolved. About 500 kg of seed cocoon are being produced here annually.

(ii) Two seed multiplication stations were set up at Kalimpong and Matigara for multiplying silkworm races of exotic varieties to meet the demand of the plain districts. It is reported that at these centres about 2000 kgs. of seed cocoons are being produced annually.

(iii) With a view to improving the food plant by grafting Japanese varieties with indigenous stocks, a scheme was taken up and introduced by the Government at Matigara. Again with the objectives of preparing silkworm eggs by using both exotic and indigenous races, a grainage was set up at Matigara. At this centre about 5 lakh layings of silk worm are being produced annually.³⁹

In addition to the aforesaid schemes implemented by the Government, there were set up seven new sericulture training centres in the hill areas of Darjeeling District during 1951-61 in the post-independence period. Among these, centres at Tripai,

Kalimpong block Relling-Bijanbari block, and the Kalimpong Nursery, Kalimpong block are being run by the Directorate of Small-Scale and Cottage Industries, while those at Mirik Block, Kurseong Block, seventh-Mile at Kalimpong block are under Tribal Welfare Department and the centre at Garubathan at Kalimpong block is under Tribal Welfare Department and the centre at Garubathan block is managed by the Department of Agriculture and Community Development. Along with implementing training programmes, the distribution of mulberry plants has been going on in every year among the villagers and trainers free of cost since 1964-1965. To follow up the extension work in the interior villages where local people have no past tradition of sericulture work, an extension wing under the Directorate of Cottage and Small-Scale Industries of West Bengal State Government was set up during 1956-1961 at Siliguri, under the direct supervision of the Superintendent of Sericulture, Siliguri, Darjeeling district. Besides a sericulture sub-research station of the Central Government was established at Kalimpong within the said period with a view to stimulating basic research on mulberry cultivation.⁴⁰

In spite of implementing the above schemes the hill areas of Darjeeling district are observed to meet only 10 per cent of the state-wide total demand for bivoltine silk-worm seeds in the beginning of the Fifth Five-Year Plan period i.e., 1974-79, while there is practically unlimited scope for increasing seed production capacity in this areas.⁴¹

With a view to removing such position of sericulture work in the hill areas of Darjeeling district and utilising favourable climatic conditions for rearing exotic breed of silk-worms, yielding higher percentage of silky matter, a broad objective was taken at the start of the Fifth Five-Year Plan period (1974-79) under the supervision of 'Accelerated Hill Development Council', to ensure production of 20,000 kgs. of seed cocoons, worth Rs. 5.00 lakhs and supply of 30 lakh bivoltine laying annually.⁴² In order to attain this objective two servicing units to cater the needs of the seed growers, nine large and three small demonstration farms vis-a-vis servicing units to meet the needs of technical know-how and other factors, relating to sericulture and one state grainage for the production of 10 lakhs d.f. layings annually were established at different strategic locations concerned with sericulture work in the hill areas of Darjeeling district.⁴³ Apart from these, following specific programmes were undertaken by the 'Accelerated Hill Development Council' to reach the said goal:

(i) To bring 200 cultivators and 100 acres of land under mulberry cultivation for seed cocoon production,

(ii) To bring 1500 cultivators and 750 acres of land under mulberry cultivation for commercial cocoon production,

(iii) To assist the cultivators of the hill areas by giving incentive in the form of financial help to the tune of Rs. 4000.00

per farmer, i.e., for $\frac{1}{2}$ acre mulberry plantation on 50 per cent loan and 50 per cent grant basis,

(iv) To give necessary technical assistance to the cultivators for successful harvest of crops and help them in the disposal of their produce.⁴⁴

As a result, within the Fifth Five-Year Plan period, i.e., during 1974-79, 100 acres of land were brought under mulberry cultivation for seed cocoon production in the seed zone. This had again brought forth the following consequences:

- (a) production of 1000 kgs eggs, i.e., 30 lakh lays was ascertained annually,
- (b) direct self-employment of 200 persons and indirect to equal number were generated,
- (c) production of 20,000 kgs of high grade seed cocoons worth Rs. 6 lakh was ensured,
- (d) supply of quality bivoltine eggs to the traditional cocoon rearing districts of West Bengal, namely, Malda, Murshidabad and Birbhum was increased.⁴⁵

However, a point is to be mentioned here that though there had taken place broad changes in respect of high grade seed cocoon production onwards 1974, but the programme to bring 1500 cultivators as well as 750 acres of land under mulberry cultivation for commercial cocoon production was not materialised only

of the subsequent years during this plan period and even in the sixth Plan period (1980-1985). This fact may be cleared from the data presented in Table 5.3. To this effect it may be stated that the said programme was very much important for its feasibility in raising the level of employment and income in the rural areas of the hill region of Darjeeling district. Its partial embodiment, which was due to ignorance and disinterestedness of the cultivators in the hill areas about the sericulture practice prevented employment and income in the rural areas to reach the level which would likely be accrued from the full-fledged implementation of the programme, to bring 1500 cultivators and 750 acres of land under mulberry cultivation for commercial cocoon production. Therefore, in order to raise the level of employment and income in the rural areas, by bringing cultivators of the hill areas of Darjeeling district in the fold of mulberry cultivation for commercial cocoon production, their ignorance and disinterestedness about this practice should be removed through publicity about its potentiality to generate employment and income.

Table : 5.1

Year-Wise Progress in the Organisation of Milk Producers Co-operative Societies (MPCS)* in the Hill Areas of Darjeeling District

Particulars	Pre-Project (1969-1970)	1975-76	1976-77	1977-78	1978-79	1979-80	(January 81)
MPCS Organised		88	196	227	254	272	266
Farmer members ('000)		2.2	4.0	5.7	6.5	6.9	7.0
Average Daily Milk Procurement ('000 LPD) during the year		0.05	4.4	12.4	13.7	11.2	15.0
Average Price Paid (Rs/Litre)		0.60	1.02	1.17	1.33	1.28	1.31

*Note: All Societies are of Anand Pattern.

Source: Government of West Bengal and National Dairy Development Board, Project Report of Darjeeling Milk-shed, Indian Dairy Development Corporation, 1980.

Table : 5.2

Period-Wise Development of Supplies of Veterinary Services in the Hill Areas of Darjeeling District.

Items of Veterinary Services	
Column (1) Period 1951-1966	Column (2) Period 1974-1981
i) Existing Veterinary Hospitals provincialised	i) One Veterinary Assistant Surgeon was posted in each block to look after the prophylaxis of the livestock of the area and also to attend the outdowcases of the Hospital.
ii) Six Veterinary Dispensaries at Garubathan, Mirik, Darjeeling, Tindharia and Kalimpong each under an itinerant veterinary Assistant Surgeon were established.	ii) 32 Veterinary aid centres were established to cover the entire rural areas of the Darjeeling hills.
iii) Nine Peripatetic service centres were established at Bijanbari, Sukhiapokhri, Takdah, Kalimpong, Algarah, Mirik & Garubathan	iii) Ambulatory clinic van services were provided for each block of the three Hill subdivisions of Darjeeling district for prompt veterinary aid at door-step of Live-stock owners.
iv) Three quarantine stations were established to check and vaccinate cattle entering or leaving the Area.	iv) Parasitic control unit was established for systematic and intensive survey to control parasitic diseases.
v) Government Veterinary Hospitals at Kalimpong and Kurseong were reconstructed	v) A Central Medical stores sub-Depot at Ghoom was established to solve the problem of supply of medicine and surgical instruments.
vi) Eight new Veterinary Hospitals were established	vi) Mobile sterility prevention camp was established to check reproductive failure.

Contd..

Table : 5.2 (Contd..)

1	2
vii. An Isolation shed at Pedong was established	<p>vii) A Central Diagnostic, Forensic, and Bio Chemical laboratory was set up to deal with Forensic and Biological problems.</p> <p>viii) Mobile clinical and spot diagnosis laboratory was established as a part of static laboratory for spot diagnosis, collecting of samples for further investigation and extending veterinary aids.</p> <p>ix) Veterinary dispensaries in each block were strengthened with the construction of new buildings and posting additional staff.</p> <p>x) State Veterinary Hospitals in Darjeeling was reconstructed for the elimination of its accommodation problem and inefficiency of it arising therefrom.</p>

Sources : (i) West Bengal District Gazetteers: Darjeeling, Government of West Bengal, 1980.

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Table : 5.3

Progress of Area Under mulberry cultivation and Number of Cultivators Associated with Commercial Cocoon Production in the Hill Areas of Darjeeling District.

Year	Area Under Mulberry Cultivation in Acres	Number of Cultivators
1974-75	73.34	N.A.
1975-76	50.50	101
1976-77	176.00	352
1977-78	272.50	345
1978-79	163.00	326
1979-80	104.50	392
1980-81	123.00	435
1981-82	127.50	394
1982-83	111.50	324
1983-84	124.50	241

Source : Office of the Deputy Director of Sericulture, Darjeeling.

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