

## **CHAPTER - V**

### **PROBLEMS OF DEVELOPMENT OF SERICULTURE AND SILK WEAVING INDUSTRY**

**5.0** Analysis done in the previous sections has revealed that the sericulture and silk weaving industry have bright prospect of development, though they can be considered as one of the most problematic sectors of the economy of Malda. Of course, problems related to manpower and economy is inevitable in any productive activity but in this case some of the problems are very crucial and unless they are solved with appropriate decisions, the sectors are bound to limp and in a few cases the very existence of the sector in near future is doubtful. Though some of the problems could be tackled with efforts in management and governmental supervision, several others need to be solved with care and action based on intensive and minute examination of the working of the units and an in depth study of the social and entrepreneurial factors governing labour efficiency.

These problems can be broadly categorised under three groups, mainly, the problems related to production, those related to marketing and those related to labour including entrepreneurship building. The first group includes the problems associated with raw materials, capital and infrastructural inconsistencies while the second group incorporates sale of finished products, price of the commodity, location of the markets, etc. The third group, however, consists of problems associated with experience, skill and efficiency of the labour forces, training facilities, entrepreneurial abilities etc. It is well understood that the primary focus of this research has been to identify all these problems and furnish appropriate solutions for meeting the objectives of development of sericulture and silk weaving industry. The problems presented here are follows:

#### **5.1. PROBLEMS RELATED TO GRAINAGE SECTOR**

##### **5.1.1 Problems Related with Raw Materials**

The problems related with raw materials are most important and can be categorised under the following four heads.

- a. problems of procurement of raw materials,
- b. inadequate supply of raw materials,

- c. high price of the raw materials,
- d. maintenance and conservation of sources of raw materials.

Almost all the surveyed grainage of Malda collect their seed cocoon from other districts or states. Malda is known as a commercial cocoon producer. 90% of seed cocoon comes from other districts like Murshidabad, Midnapur, Jalpaiguri, and Nadia etc. and also from other States like Karnataka, Punjab and U.P. etc. so from the limited seed zone area almost all the grainage purchase seed cocoon in every bund in a year. Due to limited seed zone area there is a high competition between grainages and the price of seed cocoon is naturally high. During Aghrani and Chaitra bund the insufficient supply of seed cocoons poses serious problems in grainage sector. This inadequate supply, of course, is related to their failure in systematic production.

It is striking to note that all the owners of the grainage are required to visit the seed zone area and they have to observe the process for some days. Before purchasing seed cocoon they have to test silkworms at different stages. These aspects increase the cost of seed cocoon. As the supply of bivoltine female, in Chaitra and Aghrani bunds particularly is insufficient almost all the grainage purchase seed cocoon from Bangalore. Hence it is difficult for small grainages to traverse such a long distance to buy seed cocoon. Inadequate and irregular supply of good quality seed cocoon at the above mentioned two bunds is an important problem in grainage industry. Inadequate and irregular supply of seed cocoons at times is also associated with non-maintenance and lack of conservation of source of basic seed cocoon.

### **5.1.2 Paucity of Working Capital**

Paucity of finance is actually the principal problem and many other problems are just corollary to it. Because of lack of working capital grainages are not in a position to buy the required amount and desired quality of seed cocoon. It is evident from the previous analysis that nearly 70% of the surveyed grainage sector produces DFLs upto 1 lac in a year. These units may produce more DFLs by the same labour cost, same maintenance cost of building and implements and other cost. But the production remains low because of low investment even though in Malda, there is a good demand for DFLs.

### **5.1.3 Low Investments in Fixed Assets**

Because of low capabilities of finance mobilisation of the owner, the fund available to the grainage for investment in fixed assets is also very low. It is evident from the previous chapter that nearly 76% of the surveyed grainage sector has fixed capital assets upto Rs. 45,000.00. It indicates that modern grainage house and modern implements are absent in grainage sector. Only 10% of the surveyed units have partly modern grainage house and implements. So due to the inadequate fund the owner cannot afford to construct a building with controlled environment, which is essential in producing DFLs. However, as per the traditional practices, a room with pucca wall and tali roof, which entails low investment in fixed capital, can only partly serve the purpose of quality DFLs production.

### **5.1.4 Fluctuation of Market Price of DFLs**

The price of the output has not been consistent over the years. Besides getting low returns from the price fluctuation in regard with DFLs is very high. As the grainure can never be sure the amount of the return their produce is going to fetch, they cannot make pre hand plan for future development.

### **5.1.5 Low Returns from Investment**

Low Returns from Investment is particularly a problem with the products of Bhaduri and Shrabani bund because of low quality of DFLs. This low return is further attributed to less efficient production process, and unfavourable market mechanism. The production process is time consuming, simple and primitive and the market is also limited from the producers' point of view, as a result the DFLs fetch extremely low price. In fact almost all grainage units follow old traditional methods and their implements have become not only obsolete but also less productive. It is evident from the previous chapter that 73% of the surveyed grainage has annual income upto Rs. 30,000.00. It indicates that almost all the grainages have low returns from the investments. Because of recurrent crop failures in Baishaki, Bhaduri and Shrabani bunds in silkworm rearing and grainage sectors incurs bad debts and sometimes no returns at all.

### **5.1.6 Competition from non-registered and non-trained grainage sectors**

Most of the grainure or who are trained and fall in the registered sector suffers greatly due to strong competition from the non-registered grainage sector. It is evident from the survey that most of the non-licensed or non-registered grainage sectors in Malda purchase seed cocoon from commercial seed zone and produce DFLs of low quality, hence could sell their product at hats at a lower price than licensed and registered sectors. There are many inexperienced rearers; who do not have idea about the quality DFLs purchase these products from hats at a low rate. Besides having low capital at disposal many silkworm rearers take risk and purchase low quality DFLs. But this affects the demand and price mechanism of quality DFLs. Therefore organised/licensed grainage sector cannot sell their DFLs. When the demand for DFLs is low then the amount of bad debts will be high because major grainage try to sell their goods on credit. Consequently, licensed grainages face severe competition from non-registered grainages.

### **5.1.7 Labour Problems**

Sericulture is an agro based labour intensive industry where starting from mulberry cultivation to cocoon production activities are defined as agricultural while cocoon processing for silk production and weaving falls under industrial operation. However, all the process is to be handled by skilled and partly skilled labour forces. Unlike factories where working hours are fixed, sericulture farm job is mostly governed by climate and weather factors. Therefore, hours of work are generally irregular and uncertain depending on weather conditions. Longer hours during the summer, shorter hours during winter are a normal practice. It is significantly noted that all the labourers of the grainage sectors are illiterate and skill is mainly handed down by one generation to the next. They are practically ignorant of the modern techniques of production and have no knowledge of modern equipments. Experienced labourers are insufficient in grainage sector.

The problems related to absence of technical training, seasonal employment, low wages, absence of social security measures and lack of organisation of workers are prevalent not only in grainage industry but also in all the sectors of sericulture and silk weaving industry.

### **5.1.8 Problems Associated with Marketing of the Finished Products**

The marketing structure in this district operates at two levels in grainage sector. At the lowest level is the grainage who produce DFLs and markets the whole of its production in local areas. Nearly 90% of the surveyed grainage sector markets their production to the nearby rearers. Some of the large grainage sectors sell their production to middlemen. The middlemen supply DFLs to the rearers.

It is striking to note that the total marketing system is controlled by weather. The demand of DFLs depends on the production of mulberry leaves and weather. Rearers of Malda purchase DFLs on the basis of present condition of weather and production of mulberry leaves. It is a common phenomenon in grainage sector that sometimes they dispose of their production at a very low price to the local rearers. In the absence of any rational marketing organisation the owner of the grainages are forced to sell to the local rearers within a period of 9 to 10 days after their layings. Due to absence of modern cold storage all the grainage sector try to sell their production as early as possible before brushing.

### **5.1.9 Lack of Training Facilities**

Though some of the grainages are anxious to improve their efficiency through training there is absolutely no training facilities available to the owner of the grainage sector. Though State and Central Government impart training in grainage, the new granure are hardly motivated in a right way to join them and acquire skill.

### **5.1.10 Lack of Follow-up Programmes**

One of the causes of the low popularity of training programmes is the lack of follow-up actions. Many youths even after training sits idle for want of investible capitals, non-availability of raw materials and difficulties in marketing the quality finished goods. For example, in 1996, 114 youth trained from Granure Training Institute, but only 30% of the trained youths are engaged in the production of DFLs.

### **5.1.11 Lack of Research and Development Efforts**

Adequate research and development efforts are not given to increase the output or to find out research products of high quality cocoon. Due to lack of

Research and Development efforts almost all the grainages are interested to produce Nistari type of silkworm as opposed to China where the government supplies only  $F_1$  DFLs to the rearers.

## **5.2 PROBLEMS RELATED TO THE FARMS OF SILKWORM REARING**

Any planned development of sericulture has to be a programme for a higher growth rate than the normal progress. Planned development is induced development. The plan programme may provide for an appropriate development of infrastructure, adequate provision of financial resources and requisite administrative effort. All these may be of no avail if the central figure in sericulture; the mulberry farmer is neglected. The mulberry farmer who is usually a small farmer constitutes the backbone for the sustained spread of sericulture. Unless his problems are identified for taking necessary remedial actions, planned programme of development may not be successful and the targeted growth cannot be achieved. Hence an attempt is made in this section to identify the problems of the mulberry cultivation and sericulturists, in order to focus on the factors, which operate as constraints in the development of sericulture.

### **5.2.1 Problems Related to Mulberry Cultivation**

- (i) The pressure on land due to population increase is gradually becoming high day by day and the size of the mulberry cultivated land is gradually becoming smaller. It can be concluded that nearly 76% of sericulturists of Malda have below 1.00 acre of land. So the size of mulberry field is gradually becoming smaller. Beside fragmentation of land is also an acute problem. The cost of operation is relatively higher in case of smaller and fragmented plots.
- (ii) The smaller plots that are uneconomical from mulberry cultivation point of view and are also fragmented are usually converted to mango orchards in Malda district thus leading to decrease in mulberry cultivation land and production of mulberry leaves consequently.
- (iii) Nearness of most of the mulberry fields to the residential area (within 0-2 kms.) of the village has increased the maintenance cost because protection of the mulberry fields from domestic cattle is a necessary.

Production of mulberry leaves also depends upon the location of mulberry cultivated land. It has been found that the mulberry cultivated land which is located close to the residence usually have low production per crop.

Besides when mulberry is cultivated close to a mango orchard then the mulberry leaves become poisonous because mango orchards are sprayed two or three times a year with pesticides. Hence mulberry leaves also get partly affected.

- (iv) Malda district has a high percentage of non-irrigated mulberry cultivated land. Nearly 60% of the surveyed units have no irrigational facilities. Therefore, the rearers of Malda depend on rainfall. Because of assumed rainfall during Bhaduri bund, generally production of mulberry leaves per acre is very high in this bund than in the other bunds. Due to high demand of mulberry leaves during Chaitra, Aghrani, and Baisakhi bunds the price of the mulberry leaves remains high but the production of mulberry leaves remain low due to the paucity of irrigational facilities. Hence nearly 80.5% of the small rearers do not possess irrigational facilities have to purchase mulberry leaves from market to meet the required demand. So lack of irrigation is a vital problem in Malda district.
- v) Nearly 60% of the mulberry cultivated land is low lying and every year it is flooded during rainy season. Stagnation of water for some days is harmful to the growth of mulberry cuttings.
- vi) Though Malda is considered the heart of sericulture activities in West Bengal, leaf productivity is gradually decreasing due to knot nematode diseases of the roots. Some sericultural pockets e.g. Mohhabatpur, Mothabari, Panchanandapur, Pataldanga, Bahadurpur, Chotomohidipur, Silampur, Sripur, Khanpara and Alinagar are severely affected by these diseases. The local variety is more susceptible to the diseases as compared to the improved S<sub>1</sub> strain.
- vii) Almost all the mulberry cultivated land in Malda is under local variety of cuttings. New type of improved cuttings S<sub>1</sub> from state or central government is not available. However, 66% of the sericulturists cultivate

their land under high yielding variety of mulberry cuttings but they have land only up to one acre. The rearers are poor and they have no surplus amount to re-establish their cultivated land from local variety of cuttings to improved  $S_1$  cuttings.

- viii) It is significantly noted from the field survey that mulberry plants in nearly 70% of the mulberry cultivated land have been planted before --- years. These areas planted with traditional cuttings of local variety cannot produce sufficient mulberry leaves as new mulberry plants do.
- ix) Insufficient use of manures and fertilisers is another cause of low production of mulberry leaves in Malda. The consumption of fertiliser per acre is very low in Malda district. Thus the average cost per acre is only Rs. 3450.32.
- x) Nearly 77% of the sericulturists in Malda depend on hired labour for mulberry cultivation. Demand of hired labour is particularly high during Chaitra and Aghrani bunds only. As mulberry cultivation is a seasonal job, labour shortage during Bhaduri and Baisakhi bunds is a common phenomenon in Malda district and this increases the wage rate during some of the days of Chaitra and Aghrani bunds. Therefore, production cost of mulberry leaves also becomes very high.
- xi) Landlords and farmers having surplus land offer their land to small farmers on lease for one year, but the poor farmers cannot afford to invest money for new planting or replacement of old plants just for one year. Hence it affects the mulberry production.
- xii) Traditional ways of cultivation is notable because a great number of farmers are not influenced by modern means of cultivation. Nearly 65% of the sericulturists are illiterate and these people show little interest to adopt modern techniques of cultivation.

### **5.2.2 Problems Related to DFLs**

- i) It is noted in an earlier chapter that Malda is not self sufficient in the supply of DFLs from the Central Silk Board as well as the State Government. The present supply of DFLs from Central and State Government meets only 10% of the total demand. 90% of the total

required DFLs come from local licensed or non-licensed grainage. The absence of DFLs from Government sector leads rearers to depend on the local grainage for procuring the seed. It is a source of risk, inadequacy and instability. The absence of quality in the supply of DFLs exposes the sericulturists to economic risk of fluctuation in production of cocoon and under-utilisation of garden leaf and makes sericulture less economical or even uneconomical depending on the circumstances.

- ii) Almost all the rearers in Malda district use local race (Nistari) DFLs because they are familiar with the production processes and can problems successfully and are not efficient in the rearing of pure bivoltine layings. But in Chaitra and Aghrani bunds some rearers use bivoltine DFLs. So scarcity of pure bivoltine layings from Central as well as State Government sector is an acute problem in Malda in Chaitra and Aghrani .
- iii) Not only the inadequate but irregular supply of DFLs is a serious problem to the sericulturists in Malda. Almost all the small rearers in Malda are poor and illiterate and cannot buy high priced DFLs on cash. They are compelled to buy DFLs from local non-licensed grainage who usually supply on credit. The bargain may look lucrative at that time but may lead to crop failure many a times.

### **5.2.3 Problems Related to Rearing House and Tools**

Most of the rearing houses in Malda district are not suitable for rearing. Nearly 70% of the surveyed units have no separate modern silkworm rearing building with modern equipment like open window, net, fan, air cooler, room heater etc. Only 5% of surveyed units have partly modern rearing building with modern equipment.

It is also noted that almost all the rearers use traditional type of tools and follow the old methods of keeping the room and tools free from diseases.

### **5.2.4 Problems of Labour**

Effective operation and higher productivity of rearers also depend on efficient and technically skilled labour. But the labourers of 90% of the surveyed sericulturists and are illiterate and have received informal training from older

generation. They are also practically ignorant of the modern techniques of production. Another important problem is that sericulture sector provides seasonal and intermittent employment. There are long periods when no employment is there for labourers. Payments are done on daily basis in this sector. Hence labourers are not interested to continue to look for employment in the silk worm rearing sector. They are mostly switching to other non-formal sectors for employment. Thus there is an acute shortage in large units which mostly depend on hired labour.

Another important problem is that the number of skilled labour in sericulture is dwindling because younger generation of labour is taking to bidi making activity which provides them with regular employment. Thus there is also lowering of skill among the workers. It can be concluded that the silkworm rearing sector will remain only with the labour class people who will cultivate land and rear the worm by self-labour.

### **5.2.5 Problems of Silk Worm Diseases**

The greatest obstacle to sericulture is the diseases of silk worms and these diseases are of many kinds viz.; Pebrine (Kata), Muscardine (Chuna-Kate or Calcino), Flypest (Kuji), Flacherie (Kalsira), Gatine (Salpa), Grasserie (Rasa or Jaundice), Court (Lali) and the Dermestes Valpines. The cocoon rearers of Malda are aware of these diseases and are fighting to keep them at bay.

#### **i) Pebrine:**

Pebrine is a dangerous disease that seriously affects the growth of the silk worms. It is not possible to detect the disease with the naked eye in its initial stage. It becomes apparent only when the disease has advanced. The worms attacked by pebrine grow unequally. Pebrinised worms become paler and more translucent than the healthy ones. It causes a high rate of mortality among them. It is a slow acting disease and takes 30 days to complete development. The pebrinised worms die all of a sudden. Silk worms affected by pebrines spin flimsy and poor cocoons. Moths cut out of them are deformed and the eggs they lay do not hatch.

#### **ii) Muscardine:**

Muscardine is an epidemic of the silk worm caused by a parasitic Fungus. It could be checked by disinfection of eggs and all the appliances used for rearing the

worms in a clean way. Muscardine is visible to the naked eye when the disease is fully developed. When the silk worms are fully affected by muscardine they gradually turn lime like in appearance. The Italian name of the disease is 'Calcino' and the Bengali name 'Chuna-Kete'. A pale rose colour is seen all over the body just before death. The body becomes limp and loses its elasticity. After death, the worms look like a piece of chalk. (Anonymous, 1975)

### iii) Fly Pest (Kuji):

The damage caused by the silk worm Fly to the silk worms is not always regarded as a disease. Yet it causes a great deal of damage to the mulberry cocoons of Bengal. The fly pest generally attacks the silk worms when they cross 3rd or 4th moult. If the damage is serious, the caterpillar will not spin cocoon and if the damage is not so serious it will spin but at that stage the moth will not be formed inside the cocoon. The cocoon thus got would be useless for reeling. If a silk worm died making its cocoon, a number of maggots of the fly pest would emerge infecting the rearing room and rendering it impossible to rear the next crop.

### iv) Flacherie:

When the silkworms are attacked by Flacherie the body of the worm turns black, the silk worm rearers can easily identify the disease, which is locally known as Kalsira. The worms attacked by flatcherie become sluggish and motionless. Flatcherie generally occurs when worms eat mulberry leaves affected with tukra when they are full-grown and about to spin. Then the worms vomit a clear brownish liquid. Wiping the leaves with kerosene emulsion can prevent it.

### v) Gatine (Salpa)

Silk worms are usually attacked by gatine in its earlier stages. It is a form of indigestion and is caused due to excessive heat or cold. When affected, the worm loses appetite and do not like to eat mulberry leaves. There is a similarity between Gatine and Flatcherie. In both the cases, the silk worms turn black and putrid. Gatine is not so fatal and does not spread as rapidly as flacherie. If normal temperature can be restored, the silk worm would start eating and the epidemic could be prevented. This disease is not very common to the sericulturists of Bengal. (Anonymous, 1990)

vi) Grasserie:

Grasserie is not an infectious disease. It is caused due to the sappy condition of the mulberry leaves and lack of proper ventilation in the rearing room. As unsuitable food and faulty ventilation are the main causes of grasserie. Improvement of the rearing room and proper feeding can help to prevent an outbreak of the disease. Like flacherie, grasserie is also the result of climatic condition. As climate cannot be changed rearers must always take proper care since grasserie is more harmful to silkworm than flacherie. Grasserie attacks the silk worm in its larval stage usually after the 4th moult and when attacked the silk worms become restless and turn yellow. "If the mulberry could be grown and used at such times the bad effects of very succulent leaf would be avoided". (Kashi, K.P., 1972). The disease is also known as Rasa or Jaundice to the rearers of Malda.

vii) Court:

It is not a disease. It is a symptom of disease and caused by the germ pebrine. The use of good seed has helped silk rearers to avoid that, "Court is called in Bengal Lali, Rangi or Kur Kutte, and is more as abnormality than a disease." (Mysore Silk Association, 1950). The court is more common in the month of February and March. When the worms are given naicha leaves or leaves from shady places or an insufficient supply of leaf at the last stage this abnormality is seen. When the worms are affected with court they turn crystalline. At this stage they do not make cocoon or if they do, the cocoon becomes flimsy. The crystalline might turn into a moth but the eggs laid by it are not free from court.

viii) The Dermestes Vulpinus:

It is a kind of beetle that eats up silk worms in all its stages. This pest takes shelter in the cocoon godowns and comes with the seed cocoons. So the seeding is done outside the rearing room. The appliances are always kept clean so that the epidemic from the pest could naturally be checked. (Pringle, Jemsore 1922)

The silk growers of Malda had no prejudice in rearing silk worms. " In Malda there was no objection on the score of caste to sericulture or to mechanical or agricultural occupation." (Anonymous, 1990) But the worms were believed to be surrounded by devatas and hobgoblins. At one time, of course, in early

twentieth century, there was a belief among them that the use of microscope caused cholera and so they were reluctant to use it. When the rearers came to realise that the microscopic experiment was helpful for detecting pebrine, they gradually accepted its use. So was the case in the use of Sulphur. The rearers believed that they would incur a curse if they used sulphur for fumigating their rearing room and appliances. The burning of sulphur was considered an act of perforation by 'pundas' of Malda in as much as they believed the substance to be of some kind of uterine discharge of the goddess, Bhagabati. (Prasad, N.R. 1999). As soon as they realised the benefits of the experiments they gave up these superstitions.

### **5.2.6 Paucity of Working Capital**

Paucity of finance is actually the principal problem and many other problems are just corollary to it. Because of lack of working capital rearers are neither in a position to buy high quality raw materials like DFLs, or mulberry leaves of required amount and quality. It is noted that 80% of the surveyed units depend partly on purchasing leaves from market. Due to the shortage of working capital many rearers of Malda remain idle during chaitra aghrani and baisakhi bunds.

### **5.2.7 Problem Associated with Marketing of the Cocoon**

Marketing channels are the routes through which agricultural products move from producers to consumers. Their length varies from commodity to commodity, depending on the quantity to be moved, the form of consumer demand and degree of regional specialisation of production. Generally, the product sold immediately after the harvest, follows a larger channel. Silkworm cocoons are sold within 5-6 days of harvesting and reach the consumer through various intermediary processes and services. The present study is mainly confined to cocoon marketing in Malda district with an emphasis on primary intermediaries of the channel, from farmers to the silk weaving centres. It is noted that the marketing of mulberry silk cocoon is officially regulated in all major silk producing States of the country except West Bengal. Normally, the cocoons are sold and reeled within 10 days before the moth emerges and breaks the filaments. The sericulturists produce four commercial crops in a year in Malda and sell them locally, mainly to private agencies, reelers and mahajans. It is also found that no institutional agencies control the bulk of

cocoon (95% of the total production) transaction in Malda district leading them to exercise their monopoly, which in turn deprives the farmers from getting good prices. So the establishment of a viable regulated market is of prime importance.

### **5.2.8 Drudgery in Silkworm Rearing**

Although mulberry gardening requires better knowledge and skill to handle the cultivation as compared to several crop enterprises, the one activity which will be quite strange to the normal farmer is silk worm rearing which may be a completely new activity if he has had no opportunity to be familiar with it. Silkworm rearing needs careful handling, patience and perseverance. Most of the farmers feel that feeding silkworms in the late hours of the night involves drudgery and makes the farming families tired. Hence, drudgery constitutes one of the obstacles for the speedy growth of sericulture. (Ramana, D.V., 1987)

### **5.2.9 Climatic Hazard**

Cool and equable climate throughout the year is quite conducive for silkworm rearing, cocoon production and high Renditta. Climatic extremes upset the realisation of sericulture productivity. It has been pointed out that in the hot tropical climate, especially during the summer, new techniques like the use of air cooler, dripping of water on the rearing sheds, arranging the rearing rooms under the shade of big trees are adopted to facilitate the cocoon production. These techniques increase the cost of production marginally, but the hot climate adversely affects the quality and yield of cocoons, thereby reducing the income per acre under sericulture. High yield leaf from mulberry garden located in good soil with irrigation facilities may compensate for higher cost arising out of extreme summer climate. In any case the climatic hazard adds to the drudgery of silkworm rearing involving greater care and attention on the part of sericulturists. Due to climatic hazard the sericulturists of Malda produce four commercial crops i.e. Aghrani, Chaitra, Baisakhi, and Bhaduri. Out of four commercial crops only two crops i.e. Aghrani and Chaitra are more suitable for cocoon production.

### **5.2.10 Lack of Extension and Innovation**

Sericulture is not a routine type of activity. It requires constant improvements based on research results conducted in the CSRTI. As the growth of

sericulture is accelerated, more and more sericulturists need a lot of scientific information and skill during the period of raising the mulberry garden and during the period of rearing silk worm as the activity demand a higher degree of skill and attention as compared to crops like paddy, sugarcane and tobacco.

The sericulture department's range officers are required to pay frequent visits to sericulturists to guide them in their work, to check the diseases as and when they are detected and to persuade them to cultivate better variety of mulberry with proper manure, fertiliser and watering and to adopt crossbreed races of silk worm and better methods of rearing. If the new sericulturists fail to utilise the extension services properly, they may get discouraged in their new enterprise, their failure partial or full may discourage other and upset the process of innovation in introducing the new enterprise. Speedy growth of sericulture postulates intensive extension services to facilitate healthy innovation. The survey conducted revealed that 98% of sericulturists of Malda could not get any access to departmental extension service.

#### **5.2.11 Absence of Minimum Economic Price and High Price fluctuations**

No steady growth of an industry is possible without stable and minimum economic price for its products and sericulture are no exception. There is violent fluctuation in sericulture industry for a number of reasons. Instability of cocoon crops, wide variation in the quality of cocoons harvested, absence of standardisation and quality control, poor marketing facilities are responsible for wide fluctuations in the price of cocoon. It is true that during rainy season the quality of cocoon is poorer but the rearers of Malda are forced to sell their products at a low prevailing price, because the moth emerges piercing out of the cocoon on the ninth or tenth day of the cocoon formation rendering the cocoon useless for reeling. It is noted from the survey that price of cocoon in Bhaduri bund is low (average per kg. is Rs. 34.00) where as in winter bunds (Aghrani and Chaitra) the price of cocoon is high as Rs. 100 per kg. of cocoon.

### **5.3 PROBLEMS OF REELING, TWISTING AND WEAVING INDUSTRY**

#### **5.3.1 Problems Related with Raw Materials**

The inventories of the silk weaving industries clearly exhibit that almost all the sectors are based on local raw materials. This aspect has however a positive

point for further strengthening the base of the industries. But, at the moment, the problems related to raw materials of different sectors of Silk industry are:

(a) Almost all the reelers of Malda depend on local green cocoon. Nearly 70% of the required cocoon in reeling sectors is available from the local rearers. But the quality of cocoon of Malda is not high in all the seasons. Only two bunds namely Chaitra and Aghrani offer good quality of green cocoon to the reelers. So non-availability of the required quality and quantity of cocoon at low price has considerably affected the quality of raw silk and size of the output of the reeling industries. Country Ghosh basin and Improved basin need good quality of green or dry cocoon and due to lack of qualitative green cocoon almost all the reeling sector suffers from idle capacity.

(b) Most of the twisting industry purchase raw material either from reeler or from middlemen and this industry also suffers from lack of good quality of raw silk yarn. Local demand of twisted yarn in Malda is also low because the weaving sector in Malda is not developed. Only Country Ghosh basin and Improved basin produce good quality of raw silk which is partly used in twisting industry.

(c) The raw material problem is extremely acute for the weaving industry in Malda district. Survey reports show that due to non-availability of required quality at a low price 85% of the surveyed units depend on Korean raw silk yarn. Korean silk yarn is not freely available in Malda because it comes from Bangladesh illegally. So there is presence of high idle capacity in weaving sector which points to the acute problem of shortage of raw materials.

### **5.3.2 Paucity of Working Capital**

Paucity of finance is actually the principal problem and many other problems are just corollary to it. Because of lack of working capital all the sectors under silk industry are not in a position to buy the raw materials of required amount and desired quality. Even when the raw material is at their disposal, these industries remain idle for some days of the year. As the stock of the raw material gets exhausted they wait for the next season for fresh supply. Only four commercial crops in Malda supply raw material in a year to the silk industry. A good number of units are operating to the half of their capacities due to shortage of working capital. This situation can be changed by fresh supply of working capital to the said industries.

### **5.3.3 Low Investment in Fixed Assets**

One of the major problems of Silk industries is the shortage of fixed assets and the lack of finance, due to which a large number of reeling units cannot introduce improved basin. Due to low investment in fixed assets 50% of the surveyed twisting units and 40% of weaving units produce using obsolete machines. Silk industry is capital intensive in nature. Therefore, access to both short and long term credit is necessary.

### **5.3.4 Problems of Tools, Equipment and Technique of Production**

Hand operated crude and obsolete tools in all the three sectors of Silk Industry have considerably affected the productivity and quality of output of these sectors. The reeling, twisting and power loom units surveyed are primitive. Primitive and inferior technique, which is partly due to the illiteracy of the small entrepreneur and partly due to his striking steadfastness to traditional methods, involve much labour and time and lead to small output and substandard products.

### **5.3.5 Problems of Marketing of the Finished Products**

A good market for the finished products is important to promote the well being of the small entrepreneur. But marketing of the finished products of several sectors of Silk industry has certain limitations:

- i) 90% of the surveyed reeling sector sell their raw silk yarn to the middleman or mahajan. The absence of local demand has led to the exploitation of the small producer.
- ii) The absence of agencies that can fix the rate of raw silk yarn in Malda.
- iii) A maximum number of small reelers are illiterate. Their ignorance of potential market also affects the output.
- iv) It is an important factor that Indian raw silk has no demand in the International market because of its inferior quality. So, unfamiliarity with export activities of raw silk yarn is a barrier to the development of reeling as well as silkworm rearing sector.
- v) From the field survey it can be noted that Korean raw silk yarn is available to the weavers illegal. So sale of local raw silk yarn is affected adversely.
- vi) Malda district is the largest producer of silk yarn in the State of West Bengal but unfortunately there is little or no development of silk twisting and weaving

industry. The low development of weaving sector means that the local demand for twisted yarn is also very low. The owner of the twisting unit has to seek market outside the district and the State. This situation hampers or discourages the establishment of more twisted yarn factories in the district of Malda. Mahajans and middlemen control the market of silk yarn as well as twisted yarn.

vii) It is evident from the survey report that 95% of the 'Than' and 'Sharee' produced by power loom is sold to the traders of Calcutta, Bangalore, Bhagalpur. Some traders of Calcutta purchase 'Than' and 'Sharee' from the power looms and after printing and dyeing they sell in the market. So these traders become beneficiaries by the sale of goods rather than the owner of the power looms. It is also noted that the traders purchase the products from power loom by credit and payments are delayed for 3 to 5 months. Due to improper marketing system almost all the power looms in Malda have a high idle capacity. It can be said from the survey report that 60% of the surveyed units may stop their production due to such marketing problems in near future.

#### **5.3.6 Problems of Labour**

Effective operation and higher productivity of the small enterprise also depends on efficient and technically skilled labour. But the labourers of over 98% of the reeling industries surveyed are illiterate and their skill is mainly based on the training and knowledge obtained from older generations. Although the reeling industry displays individuality and creative genius in making a variety of products, they are practically ignorant of the modern techniques of production and also of operating improved equipments.

Another important problem is that of seasonal variation in the extent of employment of labour. Besides working in silkworm rearing, labourers are also engaged in bidi making and other agricultural activities when SWR do not provide employment. Therefore, labourers are uncertain of their employment throughout the year. Another important problem that has surfaced is that young people do not like to work in the reeling industry because they are more conscious about their health. Survey report shows that 70% of the labourers engaged in the reeling industry are above 35 years of age. Generally the participation of young labour in reeling industry is low and the crisis of skilled labour is an important problem in the reeling industry. Handling labour, which is a major contributor to the industrial

production, is one of the most difficult tasks of the industrialist because of the human element involved in it. It is evident from the survey report that weavers come from Maharajpur, Islampur and Murshidabad. The crisis of skilled local weavers in this industry is one of the eminent problems leading to high labour wages.

### **5.3.7 Problems Related to Power Supply**

Lock of uninterrupted supply of electricity is one of the main cause of low production in improved basin, twisting and weaving units. The irregular and erratic supply of electricity hampers the production and results in the increasing cost of production due to loss of working hours. It is evident from the survey report that most of the twisting and weaving units have not got industrial electricity connection from W.B.S.E.B. So these units run with the help of the generator resulting in high production cost.

### **5.3.8 The Problems of Organisation**

The solutions to the several problems of raw materials, credit, organisation of research and marketing discussed in the preceding pages depend on organising small industries effectively. It has been widely accepted that such an effective agency in the industrial cooperative organisation is necessary. Although attempts have been made in the state to enlist several small industries in co-operative organisation, progress has been insignificant. It is evident from the field survey that there is no such effective organisation in Malda.

### **5.3.9 Lack of Training Facilities**

Though most of the entrepreneurs engaged in silk industry are anxious to improve their efficiency through training there is a dearth of training facilities available to the owners and workers of the silk industry sector. Though State and Central Government run few training courses, the new generation and weavers already engaged in weaving are hardly motivated in a right way to join them and acquire the requisite skill.

### **5.3.10 Lack of Follow-up Programmes**

One of the causes of low popularity of training programmes is the lack of follow-up actions. Many youths in Malda even after training sit idle for want of investible capitals, non-availability of raw materials and difficulties in marketing the finished goods. Though some of the labourers engaged in twisting, and weaving industry are anxious to improve their efficiency through training, there is absolutely no training facility available from the Central or State Govt. Although Central Govt. through CSB are imparting training for making weaving masters the scope for the common people is very limited.

### **5.4 CONCLUSION**

It is evident from the earlier accounts that there is a good potentiality for growth of sericulture and silk industry in the study area but unless the deterrents and bottlenecks of sericulture development are tackled by appropriate action, speedy growth cannot be ensured. The main obstacles for speedy growth from the point of view of sericulturists are absence of self-sufficiency in seed production, drudgery of silk worm rearing, climatic hazards and absence of good marketing infrastructure. So far the silk industry is concerned weak and sick twisting and reeling units and weaving industry of negligible size is the major problem. Besides, low investment in fixed capital assets, inadequate credit facilities, inadequate extension and innovation services, lack of follow-up programmes add to the quantum of problems. To survive and thrive sericulturists and owners of silk industry require a minimum floor price for their output and stable price level free from violent fluctuations. In order to find out the impacts of factors regulating the process of production, income generation and output growth an attempt has been done in the next chapter to conceptualise them in a model form. Direction and magnitude of the relevant policy variables have been determined by regression analysis using least squares method.