CHAPTER - IV

SMALL SCALE AND COTTAGE INDUSTRIES

Introduction

Tea is the leading large scale industry in this district, which has been discussed in its various aspects separately. Besides tea, there is no other large scale industry in the district. Recently the Small Scale & Cottage Industries developed schemes based on the raw materials available and the local demand. With the progress of time prospective industries are planned to be established in the district. Old time industries relate to weaving of gunny cloth of a very coarse quality called 'Dhokra' and 'Striped' Cloth called 'Phota' made mainly of Jute. But this industry is in a declining stage as there is little demand for these products now. Another old time industry is the cultivation of 'Eri' from worms grown on the caster oil plants and the weaving of Eri 'Chadar' by the tribal community. But this industry also lost its importance as the tribal people have taken up other types of gainful employment. Presently mainly 8 types of small scale and cottage industries are developing in this district. They are rice and oil milling, wheat and spice grinding, stone-crushing, saw-mills, automobile workshops, engineering workshops, carpentry, hosiery, leather works, bakery, making of steel trunks, manufacture of candies, brick and tiles, suit case making, bidi making, rottary, toy making, cane and bamboo works, clay modelling, tea-chest manufacturing, fruit processing, bee keeping, printing press, utensils, ice candy, aerated water, paint and varnish, soap, jewellery, musical instruments, spunpipe etc.
There were only 688 registered units before 1980. Apart from this, more than double the number of unregistered units were in operation within the district. In 1982 the number of registered units rose to 3850 employing about 11620 persons. Still there are large number of unregistered units which are in operation. Registered units have certain advantages over the unregistered units. Registered units can get bank loans in the form of working finance as well as development finance for the purpose of expansion. Registered units are also entitled to government subsidies. Unregistered units do not get these benefits. (Fig. 11).

For the development of small scale and cottage industries, the district industrial office offers the following facilities to the registered S.S.I. units.

1. Loans under the Bengal State Aid to Industries Act.
2. Allotment of scarce raw-materials
3. Machinery on hire purchase
4. Quality marking of the finished products
5. Recommendation of bank loans
6. Recommendation for priority allotment of wagons
7. Subsidy on interest on working capital loan
8. Concessional rate on electricity
9. Loan grants to S.S.I. Co-operative societies
10. Incentive scheme under 16 point programme
11. Export and marketing information
12. Exhibition and publicity of industrial goods
Registered Small Scale Industries

W B JALPAIGURI
1977-1986

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(Fig-11)
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**Existing Industries**

**Wheat crushing**

This is the most common industry which is found in almost all parts of the district. Adequate supply of wheat coupled with the changing food habit of the people helped a lot towards the growth of this industry. On an average it requires a fixed capital investment of about Rs.9000/- with an employment potential of 3 persons.
Roller Flour Mill

By the side of Sevok Road and near Siliguri town under the jurisdiction of Rajgunj Police Station of Jalpaiguri district, there are 2 roller flour mills operating with a capacity of producing 6000 tons of flour per month, but half of the installed capacities of these mills are utilised because of the lack of procurement of wheat. Investments stand around 20 lacks in these two units which provide employment to 40 persons.

Bakery

Gradual changes of the food habits of the people combined with the ready availability of wheat are the main contributory factors for the mushroom growth of bakery units in urban and semiurban areas of the district. Many conventional bakery units are operating in the district but their products are considered unhygienic as they apply crude method of production. The conventional bakeries along with one semi-mechanised bakery have a total production capacity of 40 quintals per day which meets only two fifths of the estimated demand of urban areas of the district.

Engineering Industries

There are 150 tea gardens in the district which render excellent scope for widening the engineering industries. About 30 engineering workshops are directly serving these tea gardens. Some of them are also engaged in manufacturing some parts of tea garden machineries. They are producing mini-Java, Java tunnels conveyor fibre, outer grading machine
etc. Some units are making iron grills and gates.

Automobile repairing workshops are concentrated in Birpara, followed by Jalpaiguri town, Mal and other urban areas of the district.

The fixed capital investments of these units vary between ₹40,000/- and ₹4,00,000/- with an employment capacity ranging from 5 to 40 persons. Now all the tea gardens have converted their manufacturing process from orthodox to C.T.C. type. Consequently, a huge number of C.T.C. Rollers require sharpening and milling. With the increase in production, tea garden machines require overhauling on time. But presently they find it difficult to get their machines overhauled and repaired properly in time because of the paucity of the engineering workshops particularly in the far and wide distances of the district where the tea estates are located. This situation clearly indicates that there are ample scopes for setting up more engineering units in the different parts of the district.

There are three re-rolling mills which are operating in the district. These units are mainly procuring their raw materials from the auction of railway departments. Billets and blooms are also supplied by Hindustan Steel Ltd. and M/s. Tata Iron & Steel on quota basis. The fixed capital investment of these units rises from ₹3.5 lacks to ₹5.5 lacks, giving employment of 40 persons in each unit.
R.C.C. Spun Pipe

This district also manufactures spun pipe. Some units are making pipes ranging from 6 inches to 42 inches diameter. The investment is about Rs.2.5 lacs for each plant initially and the employment is about 30 persons. The main demand comes from Govt. departments, development agencies like S.F.D.A. and C.A.D.F. which are operating in this district. These development agencies also require spun pipes for the implementation of their various projects. Apart from that spun pipes are also required by departments like PWD, Agriculture and Municipalities. This type of units can also manufacture P.C.C. pole which is used by W.B.S.E. Board and pre-cast septic tank for Public Health Engineering department. The industry can also manufacture pre-cast concrete walls for fencing, tanks as water reservoir, tubes for gardening etc. The major problem of the units is the non-availability of wagons for regular supply of cement at loading points. In view of the demands from various development projects under different development agencies one or two more units could be set up within the district.

Aluminium Utensils

All the 4 aluminium utensil making units are located in Jalpaiguri town. The main problem of these units is the procurement of the raw materials. The fixed capital investment required is about Rs.60,000 to Rs.80,000 per unit. There is a great scope for developing all these units because of the
ever increasing household demands both in urban and in rural areas. Previously these units were supplied with raw materials from the manufacturing units, but since the supply of aluminium sheets is irregular, the production of these units had hampere a lot. To overcome this difficulty in the supply of raw-materials, one aluminium rerolling mill could be set up in the district along with the introduction of Govt. quota system.

**Plastic**

Six units manufacturing polythene granules and other items are in operation in the district. Out of the 6 units, two are engaged in making polythene tubler film, 2 P.V.C. shoes and the rest is engaged in manufacturing polythene granules. The capital investment of these units ranges from Rs.20,000 to Rs.1,00,000 with an average employment of about 10 to 15 persons per unit. The main difficulty of these units is the poor supply of raw materials both from waste and virgin. A wide market for polythene products now opens up for the tea industry both in the segment of plantation and in the field of marketing.

**Printing Press**

About 50 printing presses operate in the district. The reason for the establishment of too many printing presses is accounted for by the existence of tea estates. Tea gardens require regular printing works in its various departments. The investment in the plant and machinery for a printing press varies from Rs.10,000 to Rs.70,000, creating employment opportunities for 3-6 persons per press on an average. All the printing presses are spread over in different parts of the district viz.
Jalpaiguri Town, Maynaguri, Dhupguri, Birpara, Alipurduar and Falakata.

**Sodium Silicate**

There are two units manufacturing sodium silicate. One is located in Alipur Duar and the other is in Dabgram. The capacities of these two units are 800 Metric tons. The raw materials are supplied from outside the State mainly from Bihar. Soap manufacturing units are the only consumer of this product. Capital structure of the unit is about 1 lakh rupees employing about 14 persons. There is little scope for further establishment of such unit from the standpoint of difficulty in procuring the raw materials as well as marketing of the products.

**Caffeine**

There are three units manufacturing caffeine from tea waste. These units are situated in Madarihat, Maynaguri and Dabgram. The main raw material is tea waste, which is locally available. There are about 10 units operating throughout India, out of that 4 units located within West Bengal and the rest are situated in Assam and Bangalore. All these units mostly produce IP grade for medicinal purpose. Natural caffeine is produced by these units. U.S.A. and other developed countries are producing synthetic caffeine. The cost of production of synthetic caffeine is less than the caffeine produced by our country.

The capital structure of each unit is 6 lakhs with an employment of 11 persons. New unit can be opened to produce caffeine in this district. The procurement of raw material will be available from the tea gardens located around.
Soap

There are 23 units manufacturing soap, with an average production of each being 250 quintals per year. The average investment is about Rs.5000/- each with an employment of 4 to 10 persons. Tallow which is the vital raw-material of working soaps is an import item and which is not available regularly. Due to the scarcity of tallow the setting up of detergent manufacturing units cannot be considered.

Candle

Paraffin which is the main ingredient for manufacturing candle is an exclusively controlled commodity. The distribution to the actual users and the shortage in supply restricted further candle making units in the district. At present there are about 16 registered units engaged in manufacturing candle to cater to the extensive demand of the district. These units employed 2 persons in each unit with an average investment of Rs.1000/- to Rs.2000/-.

Distilled water

The district has five units which manufacture demineralised water for the use in automobiles. Out of 5 operating units one is located in Alipur Duar and the rest are situated in Jalpaiguri Town. Approximate investment in plant and machinery requires Rs.2000/- per unit with an employment of about 2 persons. Marketing of the product is difficult. Therefore the expansion of these unit is restricted inspite of steady increase in automobile registration and the development of road transport.
Stone crushing

There are two stone crushing units operating in the district producing different sizes of stone chips from the raw material called singley. The capacity for crushing chips of these units are 20 tons per day approximately. These chips are marketed to the contractors of different working departments including those working for defence. There are numerous mountain streams which carry boulders from the upstream and deposit them in the plains which provide enormous scope for using gravels for the construction of roads and building etc. in place of stone chips. But if the Govt. departments insist on the use of stone chips similar units may come up.

Bone Mill

There is one Bone crushing unit in Dabgram area of Rajgunj P.S. It has a fixed capital investment of Rs.4,66,000. It gives employment to 15 persons. It collects bone from local areas and also from Bihar state. 300 Metric tons of Bone are available in the district. If these bones are properly collected it can give impetus for setting up of new establishments.

Fruit Processing

There is enormous scope of developing pineapple processing and fruit preservation unit in the district. At present 3 units are in operation and all of them are situated within Sadar and Rajgunj block. They have been so located because of the proximity to the raw materials. These units
have a fixed capital investments ranging between ₹20,000/- and ₹30,000. Each unit gives employment to 12 persons.

**Handloom and Textile**

The handloom and Textile industries of the district is mainly located in Jalpaiguri, Alipurduar, Maynaguri and Kumargram. Previously inferior quality of handloom products were produced in these centres. They were mainly weaving napkins and saris of coarser variety. But now-a-days the quality of these products have improved a great deal. A good number of artisans have migrated from Tangail (Bangladesh) to these areas and have started manufacturing Tangail saris of finer quality. There are about 400 handlooms operating in the district under 25 co-operative societies. These co-operatives produce 2500 bales of yarn per year. Financial assistance is given to the co-operatives by lead Bank and also by the other banks of the district. The total loan amounted to ₹4,60,000 either in the form of advance or additional limit which was sanctioned during 1980-82 Annual Action Plan. About 700 weavers are engaged in this industry.

**Eri culture**

Eri culture industry is located within the rural areas of Alipur Duar sub-division of Jalpaiguri District. It is a gainful seasonal employment to the agriculturist families. This non-mulberry eri industry has got tremendous potentiality. Spinning of Eri is well done here. It is a matter of
great concern to the Govt. and gives special importance for the development of Ericulture, in order to boost up the economic self sufficiency of the poor agricultural tribal population and to meet the growing demand of Silk Yarn seeds of exotic races by private rearers of Malda, Murshidabad and Birbhum district. There is a training centre at 'Taleswarguri' under Alipur Duar Police station of Jalpaiguri district which is run by the Govt. The govt. also give financial assistance, marketing facilities etc. to the Ericulture industry. The efforts were made to increase the production through greater use of fertilizers, larger financial assistance for irrigation, establishment of graft nurseries and seed station, increasing the supply of healthy eggs and larger assistance for co-operatives. The statistical figures compiled by the lead bank survey report - Jalpaiguri, indicate that the number of persons employed in Ericulture industry in Jalpaiguri district engaged persons in regular establishment varying between 11-14 persons whereas average casual labourers in nurseries throughout the year vary from 499 - 1190. The persons employed in village rearing works vary from 1140 - 1925. The employment figures were collected over the years between 1967 and 1972. Total production of Eri eggs (in grams) range from 6077 to 7036 and the total expenditure varies between Rs.27,775/- to Rs.40,221/- during the same period. Loans under the Bengal State Aid to industries Act were also sanctioned by the State Govt., Director of Industries, Registered co-opera-
tives, District Industrial Officer and Block development Officer.

Bidi Making

In Jalpaiguri district the total area under Tobacco cultivation constitutes 6391 acres and the production is approximately 1702 metric tons yearly. Time was when in the past Tobacco was exported from Dooars area to adjoining Bhutan State and also to Dacca (Bangladesh), Calcutta and other places of India. The main market for the sale of this tobacco is in Dhupguri and Falakata where large quantities of Tobacco are sold during the season time. Presently 30% of the total production of tobacco in the district is exported to Assam, 40% to Calcutta and 20% to Orissa and the balance 10% is consumed locally of which the major portion is utilised in Bidi making. Presently Jalpaiguri district has 10 registered Bidi making units which are mainly spread over in Jalpaiguri Town, Maynaguri, Dhupguri, and Falakata. The total fixed capital investment of these units vary from one thousand to 15 thousand and the value of total annual capacity ranges from Rs. 12,000/- to Rs. 1,20,000/- number of persons employed in these units vary from 2 persons to 10 persons.

Cane & Bamboo

The district abounds in cane and bamboo groves. In creeper jungles there are cane brakers in the evergreen type of forests on the eastern parts of the district. The bamboo groves are also found near villages.
Cane furniture such as centre table, chair, sofa, stool, swing etc. of different shape and designs are made by the craftsmen of Jalpaiguri district. They are mainly concentrated in Jalpaiguri, Lataguri and in Alipurduar towns. In Maskalaibari, a Small village adjacent to Jalpaiguri town has a concentration of 42 families having engaged in these canefurniture making. They are selling their finished products in Siliguri market. But these craftsmen are not getting the remunerative price of their products as they are selling these goods via middlemen. Only two registered units are making Canefurniture having employed 15 persons with a fixed capital investment of 20 thousand rupees. Raw material i.e. Cane is also imported from Assam as the cane of Assam is of very good quality than that of locally available variety.

It is observed from the survey that the cane and bamboo baskets are extensively used in tea gardens by the workers engaged in plucking tea leaves. Considering the demand and potentiality it is proposed to establish 8 units for making bamboo baskets in this district.

The economics of such a scheme will not cost much. The cost of tools and equipments will need 400 rupees. The running expenditure for raw materials i.e. bamboo and metal strips for 2 months will cost another 3000 rupees. Five unskilled labourers together with miscellaneous expenditures will require another 2000 rupees. Bank loans are available for the purpose. The profitability rate per month, will be 1000 rupees.
Prospective Small Scale Industries

A recent survey was conducted by SSI department in collaboration with Small Industries Extension Training Institution, Hyderabad. The report suggested that certain prospective raw material based and demand based industries could be set up in Jalpaiguri district. The report further suggested about the location of these industries and also recommended the capacity of the production. It also indicated the investment and employment pattern together with the demands in markets. This exhaustive survey report provided a lucid guideline for the prospective entrepreneurs to take up further studies in detail in deciding on specific lines of manufacture, (Fig. 12).

Raw material based prospective Industries

1) Ginger products. India exports Raw ginger and earns a substantial amount of foreign exchange. The importing countries extract volatile and non-volatile constituents like ginger oil and cleoresin out of raw ginger. These products are mainly consumed as flavouring all food and beverage preparation. The next important factor is that the extracted ginger oil is free from any sort of microbial contamination which the raw ginger is believed to contain. As a matter of fact there is growing demand for active extracts of ginger in place of the raw variety. Jalpaiguri district affords ample opportunity for setting up of ginger product industry including ginger powder. This district produces substantial quantity of raw ginger which can be effectively used in the ginger products plants. Because the raw-
Percentage of Manufacturing Employment
JÁLPAIGURI DISTRICT
1971

INDEX
0.0-2%
2.1-4%
4.1-6%
6.1-8%

(Fig. 12)
materials are available in almost all P.S. under the district. In spite of the assured market for the ginger products, so far no entrepreneur has come forward to undertake even a medium scale manufacture of ginger product in the district. This is largely due to generally prevailing unawareness of the entrepreneurs regarding its utilisation. To help in this regard a plant has been in operation at the Central Food & Technological Research Institute in Mysore. Interested entrepreneur can secure necessary information about the industry from this institute. The Lead Bank report worked out the economics of a ginger powder plant which indicated that the total financial requirement of such a unit stands at ₹1,05,450/- in which the allocation for the plant & machinery is ₹52,500/- and the working capital being ₹52,950/-. This plant can draw an income of ₹325,715/- inclusive of interest subsidy at a rate of 3% on working capital. The annual cost of production has been estimated ₹282,260/- and the profitability of the plant is shown at ₹43,455/- before tax.

Rope & Twine

Jute and its waste fibres are considered useful in Rope and Twine making. Especially the price of Jute waste is appreciably low. Various demands for low priced ropes and twines have encouraged a number of rope making units to operate in the rural areas of our country. These units are run by artisans who considered this to be a secondary occupation. Jalpaiguri
district has about 62 baling units which give out nearly 150 tons of Jute waste in a season. With the easy availability of raw materials and the growing demands for rope and twines it is strongly felt that a number of semi-mechanised rope making units should be set up in the district without any further delay.

The economics of a Jute rope manufacturing unit is given below. The total cost of production for 200 days annually will be 95,825/- (₹) involves the cost of raw materials, Staff and labour, power, water, depreciation, insurance, rent etc. Out of this investment the annual income will be 1,20,240/- by selling of 20 tonnes of Jute Rope at the rate of 5,500/- per tonne. The profitability is 14,415/-. Source of finance is in Term loan, and working capital from bank and the rent from the investors own resources.

**Stone crushing**

Construction of many metalled roads and their proper maintenance & renovation have figured much in civil construction activities in the district in current years. Consequent upon these activities, there has been a growing demand for construction materials of which materials for road construction is in high demand. The boulders & rocks that are found in the river beds can be used as an alternative material for the purpose of road construction in the absence of black stone chips. Presently the demands for stone chips are partially met by civil
contractors by employing manual processes for crushing boulders in the river bed itself or at the site for such construction activities. Obviously, this type of practice involves large number of employment. It is also time consuming and the output suffers from non-conformity with the desired specifications.

Considering the gap between supply and demand and also various problems pertaining to the regular supply of road metal and to ensure regular supply of them, a stone crushing unit can be opened in the district. The suitable location for this unit may be Mal, Chalsa, Alipurduar or in Birpara because these places are in close proximity to rivers abounding in boulders and rocks. The total cost of machinery and equipment for stone crushing unit is Rs. 60,000/-. It will generate employment for about 40 persons. A 20 H.P. motor is required to run the unit. Supply of power should be assured for this unit. Otherwise installation of a diesel engine would involve additional expenditure to the extent of Rs. 20,000/-.

Tannery

Tanning industry has got a lucrative market now-a-days. Tanned leather has always fetched high prices in domestic markets and also has a tremendous export potential. The tanned leather has added new dimensions to this industry. In Jalpaiguri district only the primary processing activities are done. The only activity is confined to salting of animal hides & skins. Here, the quantity of salted hides & skins which is exported from the district is quite adequate to provide scope to open one tannery unit in the
district, keeping of course, demand, in view.

This has been calculated through the data compiled from the district that about 4,500 pieces of cow-hides & 1,500 pieces of buffalow-hides are available in each week, from the slaughtered animals. Fresh goat skins are also available. The availability of goat skins amounts to 10,000 pieces per week. These raw hides and skins are sent to the five different markets. They are Jalpaiguri, Alipur Duar, Malbazar, Maynaguri and Birpara.

Salted hides and skins are sent to these localities for final despatch to Calcutta. The enthusiastic entrepreneurs attracted by the price differential existing between salted hide & skins and the tanned leather, a prospective tannery unit holds out a good potential.

At the initial stage, one may embark upon a project for sola leather tanning which requires skilled hands that can be imported from Calcutta. These skilled labours can improve the skill of local unskilled workers. The Chemicals for processing are to be purchased from Calcutta and for the other major inputs like water and power, necessary arrangements can be made locally.

The economic of Tannery reveals that its working capital for a month constitutes Rs.7,26,000/- on account of raw materials which means 1000 buffalow & cattle hides weighing 20 kgs. cost at the rate of Rs.3/- per kg. and chemicals work out to be Rs.67,000/- and the other expenditures
on different heads like leather technology, skilled and unskilled labour, water and electricity and miscellaneous items. The annual income of the plant would be Rs. 9,60,000/- and the annual cost of production will work out to be Rs. 8,96,150 which constitutes 40% return on the investment. The employment requirement will be 30 H.P. It is better to open a tannery unit at the outskirt of Jalpaiguri town.

**Garlic Powder**

Garlic powder is mainly used as a condiment in foodstuff preparations. It also finds use in medicinal preparations as a carminative and gastric stimulant. As such preparation of garlic powder has become a well established industry in USA & Europe. In India Garlic is produced in appreciable quantities and consumed as such in food preparations. Due to lack of scientific storage and transportational system 20% of the crop is wasted away by transpiration and microbial attack.

Garlic is grown in abundance in Jalpaiguri district. So far this gainful resources is not properly utilised. The garlics are sold in plenty in local markets at a very cheap rate. According to the information gathered from various market areas within the district indicating the quantity to be about 1000 tonnes. So far this production is the yield of unorganised cultivators in their small homestead lands. With the help of modern methods, production can be boosted up
keeping in mind for its utilisation and a fair price.

As the resources are there in the district one unit can be opened for preparing garlic powder. The process involves the removal of the outerskin of the garlic bulb by hand, separation of cloves, dehydration and powdering before packing. The entire process can be done either manually or mechanically. The manual method will be a tedious job, laborious and time consuming. The entire processing should be done both manually and by machine, (Fig. No. 13).

**Demand-based industries**

**Semi-Mechanised bakery**

Increasing demand of bread in both the rural and urban areas is the main thrust to open new units here. Even in rural areas, people prefer bread in place of other foodstuff. Though there are many conventional bakery units in operation, still there is larger scope for the new units. Modernised and Semi-modernised bakeries provide the necessary quality of production and also render large scale production.

In Jalpaiguri there are about 30 conventional and one semimechanised bakeries producing about 40 quintals of bread per day. But this is not adequate to cope with the growing demand of the urban, Semi-urban and rural areas of the district. To meet the growing demand for bread, 4 semi-mechanised bakeries can be opened up here immediately. The average production of breads from these units will be about 5 to 6 quintals per day.
Regular supply of basic raw-materials i.e. flour should be certain to ensure the smooth processing activities. The supply of required amount of power is essential to embark upon the processing activities.

A Semi-mechanised bakery with a capacity to produce 500 kgs. of flour per shift of eight hours can be set up at each of the suitable locations. This type of unit will require about Rs. 32,000/- as cost of processing equipment and will employ about 15 persons and power requirement will be of 2 horse power (H.P).

These units can be opened in all the towns preferably, Jalpaiguri, Alipurduar, Mal & Dhupguri etc.

**Distilled Water**

This type of water is required in the use of injectible medicines. Demand of this demineralised water has increased rapidly. The manufacturing processes of this water is very simple. It attracts the attention of prospective entrepreneurs.

This district has to import the entire requirement of water for injection from Calcutta and Birbhum. About 2.50 lakhs of 5 CC ampules of distilled water has been sold out from the wholesale pharmaceutical shops in the district in every month. Apart from this, there remains the demand of dispensaries and hospitals of tea-estates numbering about 150. These buyer are directly getting their requirement from the manufacturers at Calcutta. Considering the prospective market for distilled water a small scale unit is suggested to go ahead to manufacture
pyrogen free distilled water. This new unit can fetch a ready market of North-Bengal as no other such unit exists at present. Drug controller of the State under the Drugs control Act is liable to give licence which the prospective unit should secure. The economy of the unit is explained below. An unit with a capacity to prepare 10,000 ampules (5 CC) per day per shift will require about Rs.40,000/- as cost of plant and machinery, and employ about 20 persons. The best position for this unit should be at Jalpaiguri town because of its locational advantages.

**Umbrella Assembling Unit**

Prolonged rainy season and extensive rainfall in the district require large scale use of umbrella in Jalpaiguri. In rural areas umbrellas are used in massive scale. Specially, in Tea garden areas, every labour is using an umbrella. The management is under the obligation to supply umbrellas to their garden workers. There are about 150 gardens employing about 1.61 lakhs of workers in the tea gardens. This regular demand by the tea estates for their workers is one of the attractive market for umbrella industry. The estimated average annual purchase of each of the tea garden varies between 500 and 800 umbrellas. Thus the tea estates alone purchase 75,000 umbrellas each year. Apart from this, the demand from household side is also very high. It is estimated that about 30,000 umbrellas per year approximately, are required for the use of household side. By reviewing the situation it is obvious that umbrella assembling unit has a good prospect in the district. Only umbrella repairing
unit is in operation now. The entire demand is met by imports from Calcutta. The economics of the umbrella assembling unit will be Rs. 65,000/-.

The cost and benefit have been analysed in the following lines. Capital cost i.e. cost of sewing machines, cloth cutting machine, circular saw, benches, work benches, hammer, hacksaw, Chisel, flier etc. will be Rs. 15,000/-. For three months working capital cost for this unit having a capacity to produce 70 umbrellas per day will be Rs. 50,000/-. The cost of raw material will be Rs. 39,000/- plus salary of skilled and unskilled labourers which amount to about 15 persons together with rent and electricity will cost another Rs. 11,000/-. Bank loans are always available. The total cost will stand at Rs. 65,000/- of which 20% should be less for margin and repayment of bank loan, will be Rs. 13,000/-. The gross profit for one month amounts to Rs. 3775/-. If the income from sales of umbrellas which will be 70 pieces per day at the rate of Rs. 12 per piece will amount to 21,000 per month. The term loan is to be paid by 20 monthly instalments. Therefore, with a view to utilising the under utilised available skill in the district and to feed the local needs a few small units can come up to serve the situation. To begin with, two units can be started. Jalpaiguri town and Alipurduar town are considered the best location for these units.
Household Detergent Powder

Detergent powder is now very popular among villagers. New and old companies are all running in profits inspite of their higher price as compared to soap cakes. This popularity of detergents proves largely their comparative advantages of use over the alternative one. The detergents have the novel chemical property which enables them to overcome the handicaps encountered by soaps in terms of hardness of water or failure to remove all types of dirt, namely yellow stains from white cloths. Detergent powders are mainly used by urban people.

In spite of all the advantages of detergent powder, cake soap is being widely used due to its comparatively lower cost. People in lower income groups prefer soap cake. The big manufacturers of detergent powder have mainly concentrated on urban demand. The higher marketing cost & overhead expenses borne by these manufacturers are reflected in higher prices of detergents. It is strongly felt that low priced detergents should be introduced in the un-explored rural and urban areas of the district.

Considering the above situation following formula can be adopted to produce cheap detergent powder for use of general laundry purposes. A plant having a capacity to manufacture 120 tonnes of detergent powder and soap cake would require Rs.1,85,000 together in land, building, plant and machinery, working capital (for 2 months) and other infrastructure linked with it. The plant and machinery requires Rs.89,000. Raw materials like Dodycyl Benzene (2000 kg.) soda ash,
sodium Tripolyphosphate, sodium silicate, sodium sulphate, Borax and other materials are needed for manufacturing detergent soap. The annual turnover from the sale of 120 tonnes of detergent cakes and powder at the rate of Rs.5000/- per tonnes will be Rs.6,02,106. Cost of production, if deducted, will stand at Rs.34,839. Total financial requirement will be Rs.1,85,000. The ideal location of this unit is Jalpaiguri town where 4 soap cake manufacturing units are operating presently. From this area it is easier to move the supplies of the product to the other towns like Alipurduar, Siliguri, as well as the hill towns of Darjeeling Kalimpong, Kurseong etc.

**Wire nail**

Though this hardware item is very small but its demand and necessity can not be ignored. It is a very important item in our daily life. Jalpaiguri district in particular wherein carpentry and wood work abounds, its need requires hardly any emphasis. Areas of foothill region, tea gardens, forests and also in towns wooden houses are in plenty. In addition to that wooden furniture making is also increasing. In view of these activities wide scale use of wire nail is also of appreciable magnitude.

At present this item has been imported from Calcutta and also from the neighbouring districts. There are as many as thirty big shops or wholesalers get thier supplies from outside, as there is no manufacturing unit in the district. The estimated monthly demand of this item is about 12 tonnes.
In general the sizes of wire nails vary from 1 inch to 4 inches. But the main demand is for 1 inch to 2½ inches. This is to be noted that tea estates are purchasing a larger volume of this directly from Calcutta along with their other garden stores.

Tea estates need wire nails for packing tea chests. The total amount purchased by the district mentioned above is excluded of that indicated sales volume. The total demand of tea estates is yet to be estimated. The prospective entrepreneur may have these estimates from tea estates authorities.

Keeping in view of the situation, manufacturing of wire nail is considered to be a very lucrative venture in the district. The cost of raw materials, i.e. bright steel wire (6 g. to 16 g.) being the same all over India.

The estimated cost of a new unit is given below. Regarding plant and Machinery it will cost Rs. 45,400 which includes the break ups of high speed automatic nail making machine half inch to one inch with motor, automatic nail making machine of one and half inches to three inches size with motor. Automatic nail making machine of three to four inches size with motor, Feeding arrangement, polishing drum with electric motor, miscellaneous like weighing scales electrification etc. In the next stage the requirement of working capital for two months will be Rs. 78350/- which includes the following expenditure:-
i) raw materials, M.S. 129 to 209 tonnes @ Rs.3200/- per tonne

ii) Electricity - Rs.800/-

iii) Polishing salt - Rs.2000/-

iv) Salary and wages for
   a) management - Rs.800/-
   b) 4 machine operator - Rs.2400/-
   c) 2 unskilled labour - Rs. 400/-

Tyre Retreading

In view of arterial network of transport routes through this district connecting it to the north eastern part of the country has provided a large number of vehicular traffic. The movement of increased volume of agricultural and industrial products from one place to another has added to the volumes of traffics. Besides, the district has about 7015 registered vehicles plying regularly, specially the mini buses have become the most popular and widely used transport in this district. So the volume and magnitude of vehicular traffic movements in the district can easily be appreciated.

Notwithstanding the road traffic, the price hike of motor parts specially of tyre and the gap between the demand and supply all over the country have had the resultant impact. Moreover road conditions are not very good all over the region specially in rainy season. During rainy season the roads get damaged very soon with potholes and ditches which make the plying of vehicular traffic difficult and wear and tear of the tyres occur frequently. All vehicles have to put their wornout tyres in service shops at Kishangunj in Bihar and wait till
these get retreaded. Considering the situation one tyre retreading unit can be opened up in the district which should be considered as an essential venture.

The capital requirement towards the cost of machinery and equipments is about Rs.70,000/- and the employment potential is of 10 persons. The power requirement is about 5 Horse power. The unit would be able to retread 16 tyres in one day. The location of this unit will preferably be at Birpara. Here other automobile repairing shops are also in operation. Therefore this place would be an ideal one. Birpara is also traffic mode in the district. It is connected by National Highway 31 and lateral routes (Fig.13).

Conclusion

The development of entrepreneurial abilities are primarily the responsibility of various govt. departments and the financial institutions of the district. With the development of agriculture and increased irrigation facilities, the establishment of agro based industrial units are immense. Field studies have identified certain products which have local demands and these demands also increase in volume from time to time.

Broadly speaking, industries would be classified into 3 types, namely, resource based, demand based and foot loose. Resource based industries are those which can be developed on the basis of the availability of resources in adequate quantities in the district such as agriculture, forest and minerals. The demand
for the products of resource based industries can come from within or outside the district. On the otherhand the demand for the demand based industries are mainly dependent upon the size of the district. Footloose industries are generally established on certain consideration such as better infrastructural facilities and special incentives granted by the govt. for developing under developed areas.
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