

## **Chapter V**

# **Different Aspects of Agricultural Production of Principal Crops Mango and Sericulture and The Role of Bank : Malda District**

## I N T R O D U C T I O N

Mango extensively grown over the whole District. As regards other orchard crop of this district, the name of mango comes first. In comparison to the other orchard crops like jack-fruits, Guavas, Bananas, the role of mango orchard is very significant on the economic development of the district. That is why the name of mango comes first as a orchard crop in the district, with the exception of Barind tract where the red alluvial soil is not suitable for its cultivation and the Diara step along the Ganges, where the proportion of sand in the soil is excessive. English-bazar is by far the largest and best growing mango thana. The area covered by mango garden is 15 sq. miles or 1/6 the area of the thana. The most thickly grown area along the banks of Mahananda and the Kalindri rivers. From areal view it presents an unbroken of foliage, the occasional open fields, studded with rows of dots where new orchards have been planted. The trees are planted on fairly high grounds, above the flood levels - on soil which is generally a light and rather sandy loam. The fruit has an excellent flavour and is free from taste of Turpentine so often found in mangoes of an inferior species. Large number of orchards in the North-West belonging to the Chanchal, Harishchandrapur and Bhaluka Zamindars during the time of Nizams of Bengal and afterwards, the Zamindars were deprived of this source of income. The mango is a product for which Malda is famous since the period of Sultans and Nawabs

Sericulture is a Cottage Industry par " excellence " with an agricultural base, industrial super structure and an essentially labour intensive set up. Sericulture is an effective tool for generating gainful employment to the rural population especially to the retarded sector of the community since independence. Malda has been enjoying the unique distinction of being the leading agricultural district of West Bengal since independence. It is surprising that most of us do not know that fabulously famed Murshidabad Silk that are sold in the market are mostly produced from the raw silk produced in Malda District. Topography of this district offers ample opportunity for the growth of mulberry cultivation and silk worm rearing successfully.

As the sericulture is an industry, the Commercial Banks and Govt. financial institutions play an important role for its development. Before the banking growth in the rural areas, private money lenders were the only financial source. But now-a-days their influences has been curtailed. If the Commercial Banks and Govt. Financial Institutions extends more support the fate of sericulture at Malda is really promising. On the otherhand the reluctand attitude of the sericulturists towards the repayment of loan should be altered.

a) Distribution of Mango Orchard at Malda and its Variety.

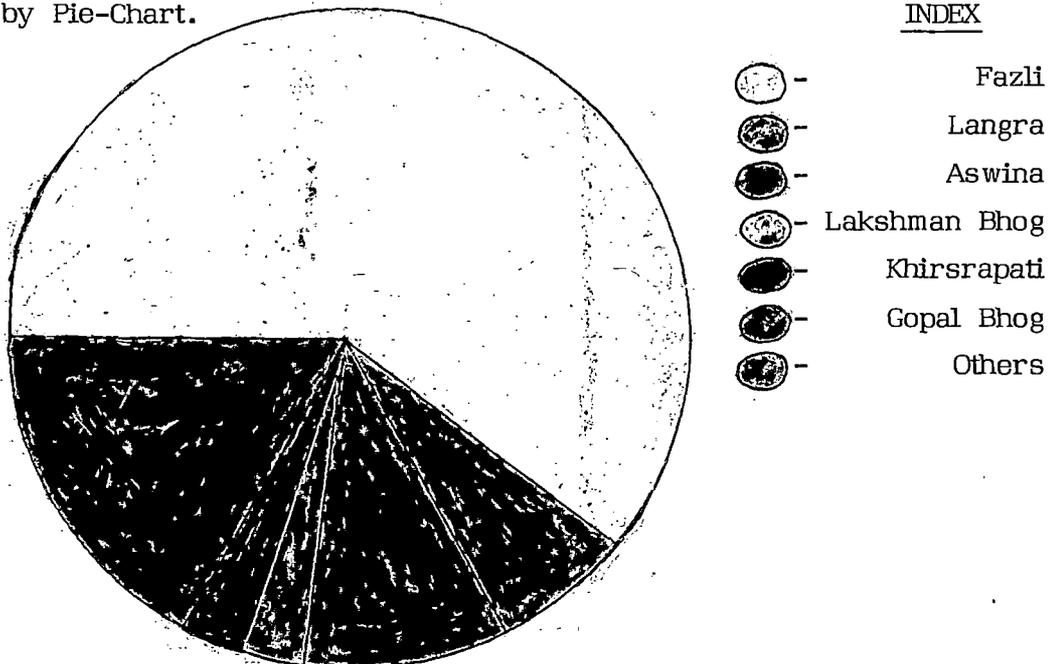
As per a national estimate the variety-wise coverage is shown in the table 5.1 .

Table : 5.1.

Distribution of mangoes in variety-wise

Sl. No.	Name of the Variety	% of the production
1.	Fazli	60%
2.	Langra	7%
3.	Aswina	10%
4.	Lakshman Bhog	3%
5.	Khirsrapati	2%
6.	Gopal Bhog	1%
7.	Others	17%
Total		100%

From the table 5.1 the percentage of different variety of mango is seen in this district. This data is shown by Pie-Chart.



Most of the mango grows in Malda district are concentrated in the 'Diara' and 'Tal' tracts. Block wise and Thana wise area are given in the table 5.2 and table 5.3 .

Table : 5.2

Block-wise area under mango in the Malda district

Sl. No.	Name of the Block	Area ( in hect. )
1.	Englishbazar	7,720
2.	Kaliachak - I	870
3.	Kaliachak - II	1,740
4.	Kaliachak - III	125
5.	Manikchak	2,510
6.	Habibpur	70
7.	Bamongola	25
8.	Gazole	405
9.	Ratua - I	1,630
10.	Ratua - II	1,870
11.	Chanchal - I	2,100
12.	Chanchal - II	810
13.	Harishchandrapur - I	205
14.	Harishchandrapur - II	410
15.		630
	Total	21,120

Source : P.A.O., Malda.

Thana wise Break up of Mango Orchard

Sl No.	Name of the P.S.	Area in acre
1.	Englishbazar	19,339.72
2.	Ratua	8,919.37
3.	Kaliachak	6,311.35
4.	Manikchak	5,459.59
5.	Malda	3,218.41
6.	Harishchandrapur	2,249.47
7.	Chanchal	2,217.16
8.	Gazole	926.56
9.	Habibpur	304.44
10.	Bamongola	204.31
	Total	49,150.38

Source : Principal of Agriculture Organisation, Malda.

From the table 5.3 it is seen that the total area in acre of mango is very high at Englishbazar Police Station. At present several mango orchards of matured trees are seen in Jahara Tala, Mahadipur, Gour, Amrity, Sodullapur, Jadupur (Gabgachi), Arapur, Kotwali, Nimaisarai, Milki and Sovannagar under Englishbazar police station.

Nowhere in India such a vast area suitable for mango plantation exists because of its advantageous climatic and soil condition. About 6.4% of the net cropped area of the district is

under mango cultivation. The average orchard are under mangoes in West Bengal is estimated to be 69,960 hectare forming about 61.2% of the total estimated are under all fruits. Malda itself accounts for about 25% of the total are under fruit and produces about 30% of the State's production<sup>(2)</sup>.

In 1983-84 I made a block-wise area estimate under mango orchard. This is shown in the table 5.2.

From the table 5.2 it is seen that in Englishbazar, Manikchak, Kaliachak have also a number of big mango orchard. The people of that block are proud of having big mango orchards. Some big mango orchards are also seen in some places in between Noorpurghat and Ratua under Ratua block. It is also seen that almost all the Blocks and Police Stations are the mango growing area except Barind area, where the land is not suitable for mango culture.

b) Acreage Production and utilisation of Mango :

The acreage production of mango varies from a year to year due to a disturbance of seasonal condition. In case of flood, hailstorm, drought, the production of mangoes fell from the target production. It is also seen that the percentage of export of mango is significant in a year. Despite all the climatic abuses the export of mango do not fell from its target, as the economic condition of this district depends mainly on the export of mango crop. Huge fixed capital is required for fostering a mango garden.

Circulating capital is required just at the time of ripening the fruits. Huge number of labourers are required to collect mangoes from the trees. Wages are to be paid to those workers. Moreover carrying cost of mangoes from garden to the market is to be borne from circulating capital. Certain amount of money may be spent for packing mangoes. For all this expenditure can be met up by the rising in export of mangoes. This is seen in table 5.4.

Table : 5.4

Acreeage Production and Pattern of utilisation of mangoes of Malda

Year	Total acreeage	Production in 000' tons	utilisation at green stage (in 000' tons)	Districts consump- tion at ripe stages in 000' tons	Export outside the dis- trict (in 000' tons)
1968	44,600	82.5	7.5	9.7	57.3
1969	45,000	50.5	5.6	4.6	37.4
1970	45,000	25.5	1.6	1.5	21.0
1971	45,000	50.5	5.0	2.5	34.5
1972	46,200	68.2	5.7	2.9	36.2
1973	47,000	70.9	6.0	3.0	37.1

Source : District Agricultural Officer, Malda  
District Agricultural Marketing Officer, Malda.

From the table 5.4 it is seen that production of mango

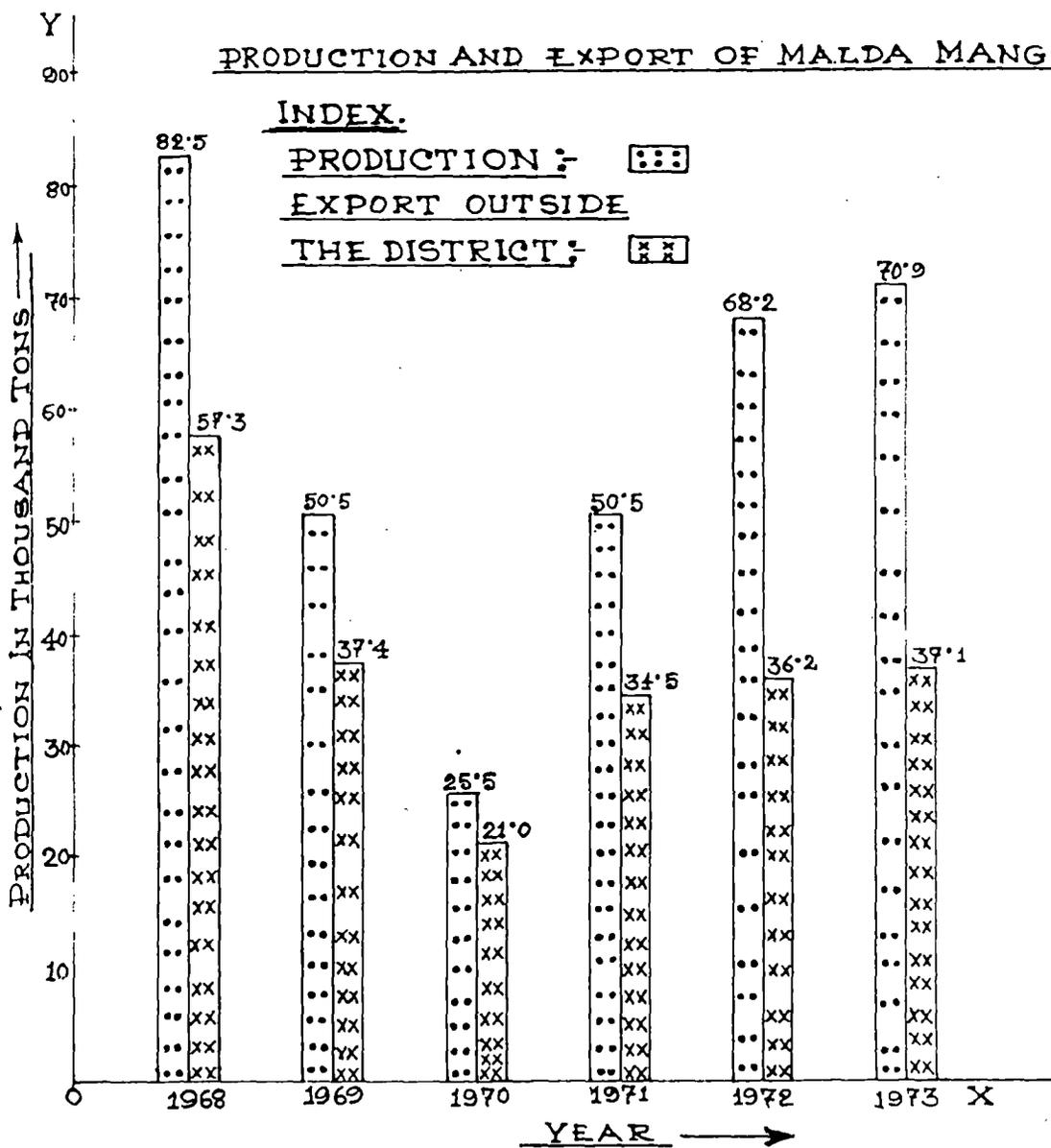
PRODUCTION AND EXPORT OF MALDA MANGOES:-

INDEX.

PRODUCTION :- [:::]

EXPORT OUTSIDE

THE DISTRICT :- [xx]



fell from 82.5 thousand tons in 1968 to 50.5 thousand tons in 1969. Generally a season of heavy production of mango is followed by a lean season. The percentage of export of mango to other districts accounted 69% in 1968 and 74% in 1969. There was steep fall in production in 1970 viz. 25.0 thousand tons, but the percentage of export was 84% in 1971, the production of mango increased to 50.5 thousand tons and export was 69%. The production and export also increased in the year 1972 and 1973.

The owner of mango crop can earn profit from the production of mango provided he has got his own land. But the amount of spending per acre of mango orchard is also very high. This is shown in the table 5.5 .

Table ; 5.5

Cost of Production of Mango

1 acre = 18 trees		
		Rs.
1.	Rent :	12.00
2.	Ploughing 12 X Rs. 15	180.00
3.	Labour for jungle cutting 8 X Rs. 10	80.00
4.	Watchman 70 X Rs. 5	350.00
5.	Agricultural Income Tax	60.00
6.	Plucking labour 15 X Rs. 11	165.00
7.	Cartman 8 X Rs.10	80.00
Total		927.00

Source : Field Survey.

The table 5.5 indicates that the spending amount is high. But now we want to show the actual profit of a owner who has got his own land. The income from the production of mango is shown in the table 5.6 .

Table ; 5.6

Distribution of income from the production of mango

1 acre = 18 trees X 6 Baskets	= 108 basket
108 baskets X 24 Kg.	= 2592 Kg.
2,592 Kg X Re. 1 per Kg.	= Rs. 2592.00
<hr/>	
Total Income	= Rs. 2592.00
Less expenses	= Rs. 927.00
	<hr/>
Profit	= Rs. 1565.00

Source : Field Survey.

The table 5.5 indicate the total expenditure of a mango orchard including 18 trees and table 5.6 indicates the income from the production of mango. It is seen that the total income is Rs. 2592.00 and total expenditure is Rs. 927.00. Therefore  $\Pi = R - C$ . So Rs. 2592.00 - Rs. 927.00 = Rs. 1565.00 is the total profit of a mango owner. Mangoes worth Rs. 4 to 5 crores are sold from Malda district in the good mango year to other parts of W.B., Assam, Bihar etc. Most of the sale are made by road transport. Even the mango also exported from Malda to the other parts of the world by air. Huge amount of

money are invested in mango trade of Malda. There is a Malda Mango Merchants' Association which co-ordinates the entire mango trade of this district. In 1958-59 Rs. 1,00,000 were advanced as loan to the Mango processing Co-operative Society situated at Old Malda. The same Society received a further instalment of Rs. 60,000 in 1959-60. The Collector of Malda district advances loans for the improvement of mango orchards and it is a special feature of this district as it abounds with mango orchards<sup>(3)</sup>.

c) Mango Trade in the District.

The mango trade is one of the most important in the District and one which has an important economic effect on the District. As soon as the trees hence blossomed, speculation begins. and the price varies according to the class of mango and the effect of the weathers on the crop. Hail and heavy rain are most injurious to the formation of the fruit. After the price of a garden is finally fixed the purchaser may re-sell it at a profit to another dealer and in this way it may change hands three or four times before the fruit is actually picked up. Almost the entire crop is then exported to Calcutta and Eastern Bengal. Most of the dealers and merchants are from East Bengal and there are also middleman who do brokery business and receive a commission from the dealers and owners of the garden. In 1953, a compact area of 44,000 acres of land were under mango cultivation. But in 1987, it has been raised to 52,000 acres. Besides Englishbazar, Ratua, Kaliachak, Manikchak, Old Malda, Harishchandrapur, Kharba and Bamongola block are also famous for the production of mangoes<sup>(4)</sup>.

d) Mango-its Economical View Point - A Survey Report :

While there has been shrinkage of area under mango in other districts it has been gradually increasing at Malda. This is because here the average return per year in case of mango is more remunerative than any other crop. Average production of mango is 5 M.T. per hectare. Among the main mango growing districts Malda has got the maximum area of 21.2 thousands hectares.

The economy of Malda district is largely dependent on mango production and its industry. Unfortunately both are in bad condition. A concerted effort both in private and public sector, is, therefore, urgently required to bring about much improvement in both the fields vis-a-vis economic uplift of the people of the district.

From a survey report on 70 trees, it is seen that the cost of cultivation of existing mango orchards per hectare is not high. This is shown in the table 5.7.

Table : 5.7

Cost of cultivation of existing mango orchards  
( per hectare ) on 70 trees

1. Ploughing (4) in a year 20 plough - Rs. 15/-	Rs.	300.00
2. Cost of manures 7 MT Rs. 60/-per MT	Rs.	420.00
3. Cost of NZ 70 kg. -5.50 oer kg.	Rs.	380.00
$P_2O_5$ - 50 kg. - 6.50 per kg.	Rs.	325.00
$K_2B$ - 50 kg. - 1.75 per kg.	Rs.	87.00
	Say	Rs. 793.00

Contd....

4.	Cost of labour for application of fertilisers; 2 labourers - Rs. 15/-	Rs.	30.00
5.	Cost of labour for application of plant protection chemical - 3 spraying 15 labourers/spraying 45 labourers x Rs.15/-		675.00
6.	Cost of labour for cleaning, pruning etc. 2 labourers, Rs. 15/-	Rs.	30.00
7.	Cost of plant protection chemicals, 75ml per tree x 3 spraying x 70 trees = 15.7 litres x Rs. 90 per litres	Rs.	1,413.00
8.	Hiring charge of foot-spraying Rs. 10/- per day for 6 days	Rs.	60.00
9.	Watch and ward for 3 months Rs. 150/- per month	Rs.	450.00
10.	Cost of kerosine, torch batteries, etc. for 3 months	Rs.	100.00
11.	Cost of harvesting of mangoes assembling, carrying etc.-500 mangoes per labourers per day 70 labourers x 15/-	Rs.	1,050.00
			Total Cost
			5,221.00
		Rs.	5,200.00

Anticipated production 10 MT per hectare cost of 10 MT mango - Rs. 2000/- per MT	Rs.	20,000.00
Cost of cultivation	Rs.	5,200.00
Net Income	Rs.	14,800.00

Source : Survey Report.

From the table 5.7 it is seen that the net income is very significant and this income is a main source of the economic development of this district. Many people get job, though it is seasonally, yet this is a actual process of getting employment

in time <sup>(5)</sup> . Therefore the mango cultivation is a good economic view in case of Malda district .

Mango Orchard and Standard of living

Mangoe is the products on which economic condition of the common people depend to a large extent. If in any year the production of mangoes become poor the people started to comment on the thoughts of the ensuing acute economic hardship.

An idea of the standard of living of the people can be had from the family budgets of some families of this district. During 1928-35 carter gave the two examples of the family budgets from Chanchal and Ratua Police Station of Malda which is shown in the table 5.8 (A) and 5.8 (B)

Table : 5.8 (A)

Family budget under different Police Station

Family budget of Tafor Sheikh of Khalanpur, Chanchal Police Station	
1. Adult Male Members	2
2. Adult Female Members	3
3. Children	2
4. Debts	Nil
5. Area of holding	16½ acres

Contd....

Proposed statement of Incomes and  
Expenditure for a year

Expenditure	Rs.	Income	Rs.
1. Rent, Interest	70	Value of produce and fodder	630
2. Taxes	7	Income from sale of fruit, fowls, eggs, milk and other products	170
3. Cost of food	426		
4. Clothing	80		
5. General household expenditure	15		
6. Cost of medicine and doctors	50		
7. Up keep of cattle and implements	24		
8. Wages to agricultural labourers	150		
9. Luxury, etc.	32		
	<hr/> 854		<hr/> 800
		Deficit	54
			<hr/> 854/-

Source : Carter, M.O. : Final Report on the Survey and Settlement Operations in the district of Malda 1928-35.

Table : 5.8 ( B )

Distribution of family budget under Balarampur,  
Ratua Police Station

proposed Statement of Income and expenditures of  
Sheikha Harigan of Ratua Police Station for a year

Expenditure	Rs.	Income	Rs.
1. rent, Interest	125	Value of produce and fodder from khas land	1000
2. Taxes	5	Rent Received	225
3. Cost of food	550	Income from sale of fruits, fowls, eggs, milk, vegetables and other produce	325
4. Clothing	125		
5. General household expenditure	120		
6. Cost of medicine and doctor	15		
7. Upkeep to cattle and implements	60		
8. Wages to agricultural labourers	80		
9. Luxury	100		
10. Interests on debts	300		
	1480		1550

Contd....

Input :-

1. Male Members	3
2. Females	3
3. Children	5
4. Debts	Rs. 2000
5. Area of holding	33 acres

---

Source : Carter : M.O. : Final Report on the Survey and Settlement Operation in the district of Malda, 1928-35.

The table 5.8 (A) actually shows a small deficit. That means common people were at that time below the average standard of living. The table 5.8 (B) is that of a family of fairly well-to-do jotedars. So far as income and expenditure on necessities are concerned the family was actually well-off. Carter's examples<sup>(6)</sup> relates exclusively to rural areas, but one fact emerging clearly from the two examples given by him is that the largest item of expenditure for every family is food. This is also the case even in urban areas. Thus on the basis of the background of mango orchard, Malda district has been achieving the economic glory since the inception of this district.

e) Constraints for the Development of Horticulture

In spite of having immense scope, some stumbling-block factors are responsible for further development of horticulture in this District. They are as follows :

i) Unwillingness on the part of farmers

Cultivation of horticultural crops, except for the vegetables, being a long term process, the farmers are reluctant to go in for further expansion of the area put under horticulture. Though in the recent past the agricultural lands were being converted into orchards, it has, very recently, come to a dead-halt, due to the reasons best known to all.

ii) Lack of Motivation

It will not be the denial of facts that proper motivation in respect of propagating the new technology for the cultivation of horticultural crops has not been made.

iii) Urbanisation of Rural Areas

Modern civilisation is gradually spreading its four pronged hands towards the rural areas by destroying the surrounding vegetations.

iv) Depth of Planting Materials

Different planting materials like grafts and gooties of mango is in short supply against the requirement of this District.

v) Reluctance for Financing by the Banks

The target group of people specially the small and marginal farmers who need Bank loans for initial expenditure for the establishment of orchards in their small holdings, are occasionally denied with Bank loans on the plea that the return of the assests such created will be coming after a pretty long time.

f) Problem of financing Mango trade and Govt.'s Activity

It is really a problem of finance mango plantation and mango trade even today. There is no arrangement of offering subsidy to the owners of mango orchards at Malda, like sericulture. Basically they don't get any regular loan from the commercial banks purely for mango production. They only can take loan from land mortgage bank by hypothecating the lands of their orchards.

There is no organised sector of financing mango trade at Malda. Private traders invest huge amount of money in mango trade. Some year the owners of mango orchards earn good profit and some year they suffer loss also. But some finance are available from the Govt. of West Bengal through S.C.I.O. Or D.I.C. They assist the finance of preparing some good products from ripe and raw mangoes. Many mango products factories have been established on a small scale by the commercial bank loans to small scale mango processing industries. This type of factories is situated in between Mangalbari and Old Malda under Malda Police Station and under Old Malda block. The two important privately owned mango processing factories at present namely "KRISHNA" and "GITA" is situated at Old Malda.

The owners of mango orchards of Malda district have to take own initiative regarding investment in mango orchards. They receive minimum help from the Govt. regarding investment in the mango orchards. This is shown in table 5.9

Table : 5.9

Pattern of Loan and Investment of the owners  
of mango orchards of Malda district

Number	Investment from own funds	Investment from Govt. Loan	Investment from other source		Govt. Assistant
			Loans from bank	Loans from Money Lender	
Out of 100 owners of mango orchards	66	20	5	7	2 (Spraying Machine)

Source : Field Survey.

The above table indicates that only 20 owners have got loan from the Govt. for investment in mango orchard out of 100 owners of mango orchards. Only 5 ( five ) owners has got bank loan whereas 7 ( seven ) owners has to borrow money from the lender. The role of money lender is significant in this respect (7) . Though development of banking institution is significant at Malda, the active role of Mahajan did not decreased. But this is seen from the above table that 2 (Two) lucky owner has got a spray machine at Govt. cost as Govt. assistance. This is a survey report on only 100 owners of mango orchards. Sufficient Govt. and bank loans are available for mango processing industries, but nurturing mango plants the orchards owners really face financial problems. Govt. and Commercial banks should come forward to

extend credit for extending mango orchards in this district.

The Govt. wants to extending mango orchards. Mango trade is one of the most important trade in the district and it has an important economic effect on the district. But it is very regrettable that in lack of finance the mango trade is going to be destroyed. Yet the Govt. of West Bengal has taken a remarkable step in extending mango orchards or the market of mango trade. On this basis they granted loan to those persons who take initiative to start the manufacturing peckles, chutney, jelly, jam etc. on cottage scale basis by the State Govt. through DIC. Therefore the role of DIC is more significant in case of development of the small scale industries.

But the State Govt. should be moved to set up a mango research unit sufficient number of experts to advice mango growers and traders the right type of medicine and manure and the right time of its application. This will be very much effective for other growers if the experts of State Govt. may take up an orchard in every block and they themselves may manure and spray the trees to show the result.

It is true that there is a tiny mango research unit in the agricultural farm of Malda district. They make some high Yielding grafting of mango trees. They have got contact with the actual mango growers of Malda. The Central Govt. have started mango research works at Manikchak and Ratua agricultural farm under the supervision of Kalyani University and Cooch Behar Agricultural College.

The agricultural marketing department, Govt. of West Bengal, Malda is trying to reduce the wastage of Malda mango. The agricultural marketing department has made the arrangement of training facilities for producing Jam, Jelly, Chutney, Sauce etc. for the period of 2 months <sup>(8)</sup>.

The Community Canning Programme mango jelly, jam, squash etc. are produced in Malda and there is also the arrangement of sale of all those mango products in Malda. As regards the conservation of mangoes the role of State Govt. is praiseworthy. The statistics of the development of this department in this regard is shown in tabel 5.10 .

Table : 5.10

The actual development of Agricultural Marketing  
Department of Mango for 1987-88

Trained Personnel	Community Canning Programme			Pilot Production Programme	
	Number of beneficiaries	Quantity	Service charge	Quantity	Amount
365	70	0.30 MT	Rs. 168	2.30 MT	Rs. 5272.82

Source : Agricultural marketing deptt., Govt. of West Bengal.

From the above table it is seen that the Pilot Production Programme is highly satisfactory. The agricultural marketing Department Malda has also made some special programme for the development of Malda mango products for 1985 which is shown in the table 5.11 .

The actual development of the work of this department upto 20th July 1985-86 may be seen in the following table :

Table 5.11  
Development of Agricultural Department,  
Malda for 1985-86 upto 20th July

<u>Community Canning Programme</u>		<u>Pilot Production</u>
Beneficiaries	Servicing charge	Sale
183 persons	Rs. 1073.97	Rs. 3079.00

Source : Agricultural Marketing Department, Malda.

From the above table it is seen that the total sale is very significant in a year 1985-86. The actual development of the work of this department upto 20th July 1985-86 is very analytical and helpful.

At Malda, for nurturing mango trees no notable loan is available. But for mango processing industries sufficient loans are available from the District Industries Centre under the lead bank schemes. Although, still there are some financial problems in the mango trade of Malda District, but if sufficient provisions are made for credit facilities for mango processing in the AAP for Malda district along with the DCP under the new guidelines of RBI's , LBS, mango processing of Malda district will make a more significant progress as these two sectors constitute a major activity of the district.

B. SERICULTURE :

a) A Discussion on Sericulture at Malda :

Factors : Climatic Conditions, reeling facilities and availability of storage establishment are the important factors necessary for sericulture. Malda is proud of having these factors of sericulture.

Malda being located in the Indo-Gangetic plains nature of the soil is mostly alluvial and loamy. Average annual rainfall recorded here is 1079 mm. and temperature ranges between 9°C and 43°C. pH value of soil in this district is 6.5 - 6.8. These factors are considered very conducive for the growth of silk.

The silk worm, used in commercial production of silk, is found, in general only where the mulberry grows, but it does not follow that wherever the mulberry thrives there are silk worms also. For many factors limit sericulture, the most important being the availability of cheap skilled labour.

DISTRIBUTION :

Malda enjoys the unique distribution of being the leading sericultural district of West Bengal accounting for more than 65% of Sericulture of the State with production of 4.55 lakhs M.T. silk worth Rs. 205.1 lakhs. In 1988 there were about 36,550 rearers family in this district spreading over 494 villages under 15 blocks and raising 4 commercial crops annually viz. Jaistha, Bhaduri, Agrahayani and Chaitra consuming about 4 crores disease free layings.

Thana wise location of important Sericultural villages of Malda is shown in the table 5.12.

Thana wise location of Sericulture Villages

<u>Police Station area</u>	<u>Name of the Sericultural Village</u>
1. Kaliachak (Block Kaliachak)	Alinagar, Nabinagar, Sujapur, Baishnabnagar, Jalalpur, Birhampur, Kaliachak, Madhughat, Kadamtola, Bangitola, Mothabari.
2. Englishbazar (Block Englishbazar)	Amtity, Plasbari, Mohadipur, Milk, Jote, Arapur, Sadullahpur, Kotowali, Chandipur, Amjamtola, Nagharia.
3. Manikchak (Block Manikchak)	Mathurapur, Manikchak, Kalindri, Lalbathani, Kamalpur.
4. Old Malda (Block Old Malda)	Bachamari, Mangalbari, Sahapur, Old Malda, Muchia.

Source : Field survey.

From the above table it is seen that the more concentration of sericulture is at Kaliachak Block. But Malda is specially important in case of the production of silk. Topography of this district offers ample opportunity for carrying out mulberry cultivation and silk worm successfully. Being located in the Indogangetic plain, nature of the soil is mostly alluvial and loamy. Rainfall and temperature and also pH value of the soil is more adjustive in this district. These factors are considered very conducive to the healthy growth of silk. For this reason Malda enjoys the unique distinction of being the leading Sericultural district of West Bengal accounting for more than 65% of sericulture of this State.

We made a survey and we can show blockwise distribution

of sericultural village, Rearers, Acreage.

Table : 5.13

Distribution of sericultural village, Rearers, Acreage.

Sl. No.	Name of the Block	Village	No. Of rearers	Area under Mulberry
1.	Kaliachak - I	116	24,195	10,700.00
2.	Kaliachak - II	65	8,500	4,229.00
3.	Kaliachak - III	47	1,375	695.00
4.	Englishbazar	79	2,500	1,015.00
5.	Old Malda	17	170	71.00
6.	Manikchak	19	300	103.00
7.	Ratua - I	07	77	42.00
8.	Ratua - II	06	41	31.00
9.	Gazole	29	87	35.00
10.	Habibpur	11	39	20.00
11.	Bamongola	04	06	03.00
12.	Harishchandrapur - I	07	22	11.00
13.	Harishchandrapur - II	03	07	5.00
14.	Chanchal - I	07	35	13.00
15.	Chanchal - II	08	37	17.00
Total :		425	37,451	16,990.00

Source : Field Survey.

b) Govt. Structure on Sericulture

Sericulture Department in this district is equipped with one District Organisation for rural works and 4 seed production farms for supplying eggs of high yielding variety to the rearers covering about 98 acres for providing disease free laying and mulberry cuttings of high yielding variety to the Sericulturists. The important sericultural nurseries are - Piasbari Central Nursery located at Piasbari ( Gour ), Sodullapur Graft Nursery located at Sodullapur, Krishnapur Graft Nursery located at Krishnapur, Amrity Graft Nursery located at Amrity and Ramchandrapur Graft Nursery located at Ramchandrapur.

Besides these, there are 100 Basins State Filature at Madhughat, Malda for producing high grade silk yarn by reeling high yielding cocoons of exotic races.

Moreover to ensure successes of crops and to produce uniform quality of cocoons 34 young silk worm rearing centres have been set up in different tracts to supply silk worms after rearing under the " Intensive Sericulture Development Project " Scheme.

c) Supply of Capital :

It is really difficult task to estimate the exact account of capital invested in sericulture of Malda. Because capital comes to sericulture from Govt. sources on the one hand and from private sources on the other hand. Govt. nurseries foster the mulberry orchard and rear silk worms for cocoons at Govt. cost. Whereas private sericulturists cultivate mulberry crops in their own plots of land and rear silk worms with a view to prepare cocoons and raw silk at their

own cost.

In 1983-84, total 31, 26, 634 Kg of cocoons valued at Rs. 1,81,01,450 were produced in this district. In 1984-85 the total quantity of cocoons production was 52,16,260 Kg., in 1985-86 it was 53,50,660 Kg., in 1986-87 it was 63,82,990 Kg. and in 1987-88 it was 63,10,100 Kg. Formerly the Silk industry was mainly financed by Marwaries. But at present this industry is being financed by the Govt. through the establishment of different Co-operative Societies.. In 1988 there were 20 Silk Co-operative Societies at Malda. The Sujapur Resham Katuni Samabaya Sangha Ltd., is in the most flourishing condition and paid up share capital is Rs. 2,400 . The Society produce 5,200 Kg. of raw silk annually valued at Rs. 10 lakhs. The Govt. used to extend loan to different types of silk co-operative societies by which the artisan-members of the society rear cocoons, utilise the silk waste and arrange for spare-time occupation of their family members. At Malda huge loans are generally granted annually from the District Collectorate to Artisan members and the producers of mulberry leaves.

The Collector of Malda District advances every year various types of loans. Out of these most important are :

- a) Artisans' loan, b) Mulberry loans, c) Loans for encouraging the raising of silk cocoons.

Artisans' loans are granted to artisans in times of distress as a measure of relief. Mulberry loan is advanced to enable the receipt to effect improvement in mulberry cultivation. The loan for helping the raising of silk cocoons is another loan

which is special to this district.

The Malda district Central Co-operative Bank has extended term loan in 1971 to the Silk spinners of this district accounting to Rs. 27,000. In 1985 the amount of term loan has been extended nearly 2 lakhs.

The agro-based sector of sericulture industry requires small investment, say, approximately, Rs. 10,000 to 15,000 of which recurring expenses is only around Rs. 2,000 to Rs. 2,400 per bigha of mulberry land. At Malda if an agriculturist has at least one bigha of mulberry land he can produce 6 charas of cocoon annually. That means 225kg. cocoons can be produce annually. In 1988 we made a field survey on this question and found -

In 1988 the average price of 50 kg. of cocoon was Rs. 900 i.e. 225 Kg. =  $4\frac{1}{2}$  maunds X Rs. 900 = Rs. 4050 will be the annual subsistence income of that agriculturist.

From that total income Rs. 4,050 if he deducts his cost Rs. 2,000 his profit will be Rs. 2,050, but the condition is that he have to give his own labour.

d) Employment ;

Sericulture is an essentially labour intensive set up. It is an effective tool for generating gainful employment to the rural people especially to the retarded sectors of the community. It provides whole time and part time employment to about 69,731 persons in the rural, Sub-urban and urban areas of Malda district

of whom more than 20% belong to S.C. and S.T. communities. Of late it has become a leading foreign exchange earner besides toning up the rural economy. At present there are 37,451 rearers family in this district spreading over 432 villages under 15 blocks. Apart from this there are about 2,15,000 peoples are indirectly engaged in the ancillary trade of sericulture. Malda district has got past glory of sericulture. So, the labourers of Malda specially of Diara region become skilled in sericulture by tradition.

Sericulture is the most prevalent subsidiary business of the farmers of Malda district. It supplies the largest source of finance, that women and children can contribute to the household. According to Census report of 1961 only 22,118 persons were engaged in the rearing of silk worms and the production fo cocoons and raw silk in Malda district. In 1988 there were about 37,451 rearers family in this district. Sericulture workers are mainly found in Old Malda, Habibpur, Ratua and Manikchak. But maximum number of workers engaged in this industry are in Kaliachak area. The number of workers engaged in sericulture has been increasing day by day and it is a good sign for the development of sericulture at Malda.

e) Economic View Point :

The economic condition of the common people of Malda at before days of independence were very insignificant. From the economic review it is seen that the daily wage of an agricultural labour was two annas and nine paise as the cost of food for two

times in a day. At that time in the Filature system of silk production, the remuneration of one reeler ( labour ) was Rs. 8 to Rs. 9 per month and the remuneration of one helper was Rs. 5/- per month. The Filature system of silk production was first started by a french gentlemen and the first factory having this fileture system of reeling silk was established by Mr. Udney at Malda. Sahapur was famous for the production of silk clothes like "Gulthisi" "Kadamfuli", Bulbulchan etc. Annual exported value of Maldahi Silk cloth produced at Sahapur was Rs. 1,25,000. Shibganj was famous for the production of silk cloth like Matka and Garad. After doing colour at Murshidabad it would export at Bombay, Madras, Ahamedabad.

A detailed statement showing the progress of Sericulture of Malda District from 1984-85 to 1987-88 is shown in table 5.14

Table ; 5.14

Blockwise statement of year-wise achivement

	<u>1984-85</u>	<u>1985-86</u>	<u>1986-87</u>	<u>1987-88</u>
1. No of Blocks	14	14	15	15
2. No. of village covered.	396	397	432	425
3. No. of family engaged in Sericulture.	34,790	34,790	35,550	37,451
4. No. of seed Producing farm.	4	4	4	5
5. No. of Grainage operation building.	2	2	2	2

Contd....

6. No. of improved variety mulberry production centre.	1	4	4	5
7. No. of young silk rearing centre.	72	5	5	60+3
8. Acreage under mulberry plantation.	15,097.75	15,362.75	16,120.0	18,120.
9. No. of persons engaged in silk waste & Matka spinning(women)	8,137	8,145	8,155	8,185
10. No. of persons engaged in reeling and winding.	10,680	10,725	10,750	10,840
11. Total quantity of cocoon production ( in Kg ).	5,216,260	5,350,660	6,382,990	6,310,100
12. Total production of raw silk (Kg)	372,600	382,190	355,928	365,885
13. Value of raw silk (lacs Rs.)	149.00	162.41	205.10	232.5
14. Total quantity of fabrics manufactured ( in Sq. Meters ).	19,463.05	19,964.50	23,816	25,950

---

Source : Sericulture profile of Malda District 1988-89.

The above table shows details about the Sericulture Profile in Malda District. This shows that sericulture is the main product by which the district is developing. The backwardness of the district has been corrected by the development of Sericulture programme. (9)

f) Bankability and Repayment Schedule .

Banking institution and other sources helped to the sericul-

tourist for giving loans. We made a field survey covering 150 respondents as sample and have prepared this in table 5.15.

Table : 5.15

Pattern of loan received from other sources by  
Sericulturist of Malda.

<u>Own investment</u>	<u>Govt. loan</u>	<u>Other sources</u>	<u>Out of 150 Sericulturists</u>
-	-	1. Loan from Co-op. Bank	52
		2. Loan from money lenders	32
		3. Loan from commercial & Rural bank	66

Source : Field Survey.

It is seen from the above table that out of 150 Sericulturists 52 families have taken loan from Malda District Central Co-operative Bank for sericulture. On the other hand 32 families have borrowed money from money lenders for investment in sericulture. We can also get the information from the Rural and Commercial banks that they have provided loans to 66 families out of 150 families, for sericulture. From the above table we cannot deny the existence of village money lenders. Due to question of self investment, the village money lenders still are extending loan at a very high rate of interest. Before Banking growth to the village, the money lenders were the only source from whom sericulturist would take loan for investment in sericulture. But

today with the increase of number of Commercial banks, the influences of money lenders has been curtailed to some extent in financing of sericulture at Malda. For this reason sericultural indebtedness to money lenders has been reduced minimum.

The role of Commercial and Co-operative bank is vital in developing sericulture of Malda. Due to the non-availability of Govt. loan and own investment for financing sericulture, the role of banks have a vital importance in developing sericulture of Malda. The Co-operative Banks and other Commercial-Rural Banks of Malda extended more loans to the sericulturists. Therefore if they can extend more loan to the sericulturist, the sericulture of Malda will be developed to a greater extent.

The overall performance of the financial institutions in extending loans, operating in the district has been satisfactory. The most impressive achievement has been that of the Indian Bank which reached 422% of its planned disbursement. The State Bank of India comes next with 387% followed by the Lead Bank United Bank of India 384% Gour Gramin Bank 305 % and United Commercial Bank 189%. The District Central Credit Co-operative Bank has financed 524% of its planned disbursement. Allahabad Bank has 220%. But there is no role in case of Central Bank of India and Indian Overseas Bank.

The problem of overdues has scaled alarming proportions. Collection as a percentage of demand of ST and MT loans of few institutions are shown in table 5.16.

Table ; 5.16

Recovery position of different Commercial Banks at Malda

Bank	1981-82		1982-83		1983-84		1984-85		1985-86		1986-87	
	ST	MT										
UBI	52	29	55	28	59	30	62	30	65	35	68	35
SBI	41	-	35	19	43	22	44	22	38	18	40	27
Ab	22	14	24	12	28	16	28	-	35	15	33	21
IB	23	18	27	19	30	19	29	21	31	21	32	21
DCCB	48	32	51	35	56	31	49	32	61	28	63	28
LDB	-	77	-	87	-	62	-	65	-	82	-	85
GGB	42	32	41	22	48	28	50	32	52	21	49	23

Source : L.B.O., Malda.

Increasing overdues are gradually restricting the flow and recycling of funds, unless steps are undertaken soon, the deteriorating position of overdues, the fuller implementation of the District Credit Plan may be seriously affected.

It has been noted that, there would be no improvement in the recovering position of bank loans. Unless suitable legal and administrative measures are taken up against reluctant defaulters. So there are the problems and issues that have affected the implementation of the first DCP of Malda. Proper review of these problems had been made with a view to making the DCP, 1986-87, a success.

The role of GGB in case of Silk Industry at Malda, Murshidabad and West Dinajpur are as follows : The respective position of Malda in case of A/C is 1986 in case of Amt. 2734 and in

case of Murshidabad it is 801 A/C and Amt. is 1161 and in case of West Dinajpur, the A/C is 496 and Amt. is 804 ( Amount in Lakhs ).

From this analysis we made a survey on Kaliachak block of Malda district for development in sericulture.

This field study was prepared from 1st. January, 1990 to 28th February, 1990. This block occupies an important place in the map of the District for the production of raw silk yarn.

[ Appendix v A ].

g) An overview of the Field Area and the Field study :

The area selected for the Project is Kaliachak block-I. Detailed physical features of Malda District as also Kaliachak Block I are furnished in Annexure-I.

Kaliachak-I block, with an area 44 Sq. miles is located in the south-west region of Malda District. Kaliachak -I, the block headquarters, there is no town in the block. Lowest percentage of rural population to total population 68% is noticed in the block. This block is densely populated with a population of 1,82,699 as per Census report 1981. Of this population, over 13,240 workers are engaged in agricultural activities. Large cultivators, who form 7.8% of land holders, have 10% of agricultural land under irrigation. Agriculture and sericulture are major economic activities in the block. Paddy, mulberry, jute are the important crops. The nature of irrigation is minor irrigation. Main source of irrigation are tanks and canals. About 6% of the net area is irrigated

by canals and 14% of the net area is irrigated by tanks. A medium irrigation Project is expected to be completed near the block area in about 5-7 years with the ground water presently available. The block offers scope for digging wells.

Out of the total cultivable area of 19,935 hectares an area of 2000 acres is under mulberry cultivation. Sericulture is highly concentrated in this block. There are about 8000 silk reelers, no power looms and about 28 silk twisting units. The block has one cocoon market, at Kaliachak. The quantity and value of cocoons transacted in the market during 1986-87 were 1200 tonnes and Rs. 189 lakhs respectively. The production of cocoons and raw silk in the block were estimated at 985 tonnes and 85 tonnes respectively during 1986-87.

#### h) INFRASTRUCTURAL FEASIBILITY :

Kalichak-I block is traditionally Silk producing area. There is high demand for mulberry leaves. More and more farmers are evincing keen interest in bringing lands under mulberry cultivation.

There are various grainages under Central Silk Board and the Directorate of Sericulture under State Govt. One Central Silk Worm Seed Project centre is located in Malda Town and one grainage under the Directorate of Sericulture is located at Kaliachak. There is a sericulture training Institute adjacent to Malda Seed Farm at Englishbazar which imparts training to the sericulturists.

The grainages supply disease free layings ( DFLS ) to the silkworm rearers, who are licensed.

There is no dearth of equipments for silk worm rearing (Chowkies, chandrika trays, racks, nylon nets, fertilisers). The various technical parameters assumed under the survey are given in Appendix ( V B ).

i) COMMERCIAL FEASIBILITY :

Coçoons are to be marketed shortly. Otherwise after formation of the cocoons the emerging moth will pierce through the cocoon making it totally unfit for reeling. There is a regulated cocoon market under the direct control and supervision of the Department of Sericulture of the State Govt. at Kaliachak itself. The market functions in three different premises where actual auctions of lots of cocoons take place. For auctions finalised and confirmed, both the buyer and seller are charged a market fee of 1% of the sale value under the existing procedure, the buyer has to pay the sale value finalised, to the market officials, who in turn, settle the account of the seller the same day. The market functions throughout the year.

This procedure has helped the cocoon growers to get reasonably remunerative prices which would not have been possible if the buyers and sellers were not required by law to transact only in the cocoons market. The State Government has enacted a legislation prohibiting purchase/sale of cocoons outside the regulated cocoon market. Only those cocoon rearers and silk reelers, who are licensed can participate in the cocoons auction by offering for sale/agreeing to buy cocoons. All the licensed rearers are

issued a pass book. In case the pass book contains any remarks as to the lien of the bank, which has finance the rearer, the marketing officer arranges to recover 1/3 rd. of the sale proceeds and remit the same to the concerned bank.

j) FINANCIAL VIABILITY

We have discussed with various institutions and agencies which play a vital role in the field of sericulture activities. We have also met several sericulturists, on the basis of this discussions, financial parameters have been evolved and are given in Annexure-II. Two farm models have been formulated under the project to reflect irrigated and unirrigated conditions.

The project envisages a physical target of 200 units with total financial outlay of Rs. 31.40 lakhs bank loan of Rs. 29.05 lakhs and refinance of Rs. 21.78 lakhs. Details of this programme are furnished in Appendix V C.

Repayment schedule of Sericulturists in case of irrigated mulberry shown in Appendix VD. A list of survey analysis is given below

	<u>1 acre farm model</u>	
	<u>Irrigated</u>	<u>Unirrigated</u>
Area under Mulberry.	1.5	1.5
<u>Investment cost</u>		
Initial cost of Mulberry planting	3250	1775

Contd....

Sericulture equipment	1658	829
Rearing House	16000	4000
Financial rate of return	40.4%	21.8%

Sensitively Analysis

Increase in cost of  
cultivation by 15%

Decrease in price of  
cocoons by 10%

( Life of assests : Mulberry  
plants 10 years : Equipments 5 years and  
Rearing House - 15 years )

Branch of the financing bank is situated in Kaliachak itself and as such is within the reach of sericulture farmers. The Branch has adequate staff to attend to pre-investment appraisal and Post-sanction supervision and follow up in respect of all the sericulture operations.

The branch had disbursed agricultural loans to the extend of Rs. 10.15 lakhs spread over 625 accounts during the calendar year 1987 and Rs. 1lakhs during the half year ended in June,1988 spread over 35 accounts. Of the above, an amount aggregating Rs. 3.82 lakhs spread over 228 accounts were disbursed for sericulture and allied activities during the year 1987 and Rs. 1.15 lakhs during the half year ended June,1988 respectively. Percentage of overdues to demand works out to 22.6% as on June,1988.<sup>(10)</sup>

S U M M A R Y

The economy of the district Malda is basically an agrarian one and it ranks as one of the most underdeveloped districts in the West Bengal. Despite this backwardness, Malda occupies an important place in the map of the State for the Mango Production. About forty five thousand acres ( 45000 ) of land are covered by mango orchards which, in normal years, bear fruit to the extent of 3,60,000 tons, the value of which in money terms comes to about Rs. 5.5 crores.

The Production of Mango has earned fame for this district. Mango is abundantly grown over the whole district with the exception of 'Barind' area. Englishbazar is by far the highest and the best mango-growing thana. It is followed by other thanas, namely, Ratua, Manikchak, Kaliachak, Chanchal, Old Malda and Harishchandrapur in that order. There are mainly two varieties of mangoes (i) the 'Gooti' of the ordinary variety of Mango grown from "seeds" and (ii) 'Kalam' which is grown from grafting. The later is of superior quality and fetches higher price. The finest variety is the Gopal Bhog, though there are other varieties namely, Brindaban, Langra, Khirshapati, Kishanbhog and Fazli.

The mango-trade is one of the most important feature of the economy of this district and one which leaves important impact on the economy of the district. The price of mango varies according to its class and the effect of weather on the crop, for hail and heavy rains are most injurious to the formation of a good fruit.

In recent years, there have been several failure of crops and there seems to be a cycle of good and bad years. A bumper crop usually comes once in four years and is followed by the bad year in which the production may come down to 25% -30% of the average production. Then comes a moderate crop with production ranging between 45%-50% followed by a second bad year. The only consolation for such a bad year is that the price rises in proportion to the extent of failure of crop. Such fluctuation in the total product and price make it very difficult to reach an accurate estimate of the annual value of the mango-trade.

Therefore, the economy of Malda greatly depends on the Mango production. In the on year it fetches about 6 to 8 crores and in the off year 3 to 4 crores of rupees. The mango also generate employment for nearly 3 lakhs of people for 3-4 month as garden watcher mango pluckers, cartman, basket making, loading etc. A seasonal activity on cottage scale for preservation and preparation of fruit products creates an employment about 1500 persons on an average for three months. Let us hope that concerted effort, better Co-ordination and sincerity will bring smile to the palled face of the rustic. Let them bustle with cheer amid the tranquility of the surrounding orchard garden.

Malda contributes 6% of India's raw silk production. 70% of raw silk production of West Bengal. The per unit area production of raw silk is double in comparison to major silk producing States of India. The average land holding of the 89% beneficiaries is upto 1.00 hectare. In our survey analysis indicates that of the total beneficiaries 56% does sericulture i.e. rearing and mulberry cultivation, 22% being cultivator i.e., grow mulberry and 11% each labourers and traders. From blocks under survey Kaliachak-I, II and III, 78% of the beneficiaries belonging to Muslim community and others constitutes 22%.

The existing mulberry plantation consists of indigenous variety requires replacement by high yielding variety. Introduction of high yielding variety is to increase productivity per unit area. In Malda District, sample household took loans from Financial Institutions. 89% of the total recipients took loans from financial institutions.

The Surveyed analysis is technically feasible and financially viable.

The major constraint affecting growth of sericulture is wide fluctuation in the price of cocoons. The sericulturists should be assured remunerative price in accordance with the quality of cocoons by fixing minimum floor price.

There is need to further strengthen the extension services. The extension centres should be within easy reach of the sericulturists. Improved high yielding strains of mulberry cuttings should be made available to the sericulturists at a reasonable cost including transportation.

R E F E R E N C E S

1. T.C.Sengupta, Gazetteer of India, West Bengal - Malda,  
PP. 11-13.
2. J.C.Sengupta, Gazetteer of India, West Bengal - Malda,  
PP.11-12.
3. This data collected from District Agricultural Marketing  
Officer, Malda.
4. Annual Action Plan on Integrated Rural Development Programme,  
Published by Malda District Rural Development Agency,  
Malda, 1989-90.
5. This information collected from Suevey Report of Malda  
District.
6. Carter, M.O. : Final Report of the Survey and Settlement  
operations in the district Malda, 1928-35.
7. This information and data were collected from Survey  
Report of Malda District.
8. This information collected from Agricultural Marketing  
Department, Govt. of West Bengal.
9. Sericulture Profile of Malda.
10. Survey Report of Study Area.