**APPENDICES**

Table A: Districts, Blocks and Panchayats Selected for Sample Survey

<table>
<thead>
<tr>
<th>District</th>
<th>Block</th>
<th>Panchayat</th>
<th>Sample Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alappuzha</td>
<td>1. Chengannur</td>
<td>Ala, Puliyoor, Bhudhanoor, Venmony</td>
<td>70</td>
</tr>
<tr>
<td></td>
<td>2. Kanjikuzhi</td>
<td>Kanjikuzhi, Cherthala South</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3. Patanakkad</td>
<td>Kodamthuruth</td>
<td></td>
</tr>
<tr>
<td>Malappuram</td>
<td>1. Nilambur</td>
<td>Vazhikkadavu, Edakkara, Chungathara, Pothukal, Chaliyar, Moothedam</td>
<td>130</td>
</tr>
<tr>
<td></td>
<td>2. Areekode</td>
<td>Oorngattiri</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3. Wandoor</td>
<td>Thrikalangodu, Mampad, Wandoor, Thiruvali</td>
<td></td>
</tr>
<tr>
<td></td>
<td>4. Kuttipuram</td>
<td>Edayur</td>
<td></td>
</tr>
<tr>
<td></td>
<td>5. Perinthalmanna</td>
<td>Melattur</td>
<td></td>
</tr>
<tr>
<td>Kannur</td>
<td>1. Irikkur</td>
<td>Ulikkal, Payyavur, Sreekandapuram</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>2. Iritty</td>
<td>Payam, Ayyankunnu</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3. Payyannur</td>
<td>Karivellur-Peralam, Eramankuttur, Kadannappally-Panappuzha</td>
<td></td>
</tr>
<tr>
<td></td>
<td>4. Peravoor</td>
<td>Peravoor, Kelakam</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>12</td>
<td>30</td>
<td>300</td>
</tr>
</tbody>
</table>
Table B: Division of the Districts of Kerala into Three Zones

<table>
<thead>
<tr>
<th>Zone No.</th>
<th>Name of the Zone</th>
<th>Representative District</th>
<th>Districts Included in the Zone</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>South</td>
<td>Alappuzha</td>
<td>Thiruvananthapuram, Kollam, Pathanamthitta, Alappuzha and Kottayam</td>
</tr>
<tr>
<td>2</td>
<td>Central</td>
<td>Malappuram</td>
<td>Ernakulam, Idukki, Thrissur, Palakkad and Malappuram</td>
</tr>
<tr>
<td>3</td>
<td>North</td>
<td>Kannur</td>
<td>Kozhikkode, Kannur, Wayanad and Kasargod</td>
</tr>
</tbody>
</table>

Table C  Statement of Income from Sericulture

<table>
<thead>
<tr>
<th>Item</th>
<th>DISTRICT</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Alappuzha</td>
<td>Malappuram</td>
</tr>
<tr>
<td>Income</td>
<td>Rs.</td>
<td>Rs.</td>
</tr>
<tr>
<td>Sale of Cocoon</td>
<td>390416</td>
<td>1801854</td>
</tr>
<tr>
<td>Other Income*</td>
<td>4850</td>
<td>28700</td>
</tr>
<tr>
<td>Total Income</td>
<td>395266</td>
<td>1830554</td>
</tr>
<tr>
<td>Expenditure</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Labour</td>
<td>8190</td>
<td>15420</td>
</tr>
<tr>
<td>Materials</td>
<td>119948</td>
<td>359051</td>
</tr>
<tr>
<td>Variable Overheads</td>
<td>40035</td>
<td>84702</td>
</tr>
<tr>
<td>Fixed Overheads</td>
<td>109385</td>
<td>283974</td>
</tr>
<tr>
<td>Marketing Overheads</td>
<td>15250</td>
<td>30420</td>
</tr>
<tr>
<td>Total Expenditure</td>
<td>292808</td>
<td>773567</td>
</tr>
<tr>
<td>Net Income</td>
<td>102458</td>
<td>1056987</td>
</tr>
</tbody>
</table>

*Income from sale of mulberry cuttings and compensation received out of crop insurance.
A CRITICAL EVALUATION OF THE ACTIVITIES OF SERIFED FOR THE DEVELOPMENT OF SERICULTURE INDUSTRY IN KERALA

INTERVIEW SCHEDULE FOR THE FARMERS

Survey No:
Date:

1. Name of the Sericulture Farmer:
2. Address:
   Panchayat:
   Block:
   District:
3. Religion:
   a) Hindu
   b) Christian
   c) Muslim
   d) Other
4. Caste:
   a) Scheduled Caste
   b) Scheduled Tribe
   c) Others (specify)
5. Total Number of Members in the Family:
6. Number of Members Participating in Sericulture Activities:
   (Including leased land if any)
8. Annual Income of the Family from all Sources: Rs.
9. Details of the Sericulturist:
   a. Male/Female
   b. Age:
   c. Education:
   d. Occupation:
   e. Training in Sericulture: Yes/No
   f. Source of Training in Sericulture:
      a. Serifed
      b. Government
      c. Central Silk Board
      d. Family Training
      e. Neighbours/Friends
   g. Period of Training (Official):
   h. Experience in Sericulture (Years):
II. INFORMATION ABOUT MULBERRY CULTIVATION:

A. Mulberry Planting Details:
1. Total Area under Mulberry:
   (Including leased land if any)
2. Variety of Crop:
   a. Kanva 2
   b. Victory 1
   c. Others (specify):
3. Planting Material Used:
   a. Sapling
   b. Stem
   c. Seedling
   d. Grafting
4. Source of Planting Material:
   a. Serified
   b. Friends/Relatives
   c. Others (specify):
5. Type of Crop:
   a. Inter crop
   b. Mono crop
   c. Both
6. Details of Plantation:

<table>
<thead>
<tr>
<th>First Planting</th>
<th>Subsequent Planting</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year</td>
<td>Area</td>
<td>No. of Plants</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

7. Fertility of Land:
   a. Fertile
   b. Most Fertile
   c. Not Fertile

B. Details of Irrigation:
1. Do Your Irrigate Mulberry Plants: Yes/No
2. If yes, Type of Irrigation:
   a) Drip
   b) Pumping
   c) Manual
   d) Other (specify)
3. If no, Specify Reason:
   a) No Need
   b) No Accessible Water Resource
   c) Financial Difficulties
   d) Expensive when compared to Returns
   e) No Electricity
   f) Scarcity of Water
   g) No Labour to Spare

C. Particulars of Mulberry Leaf Production (during 2004-05)

<table>
<thead>
<tr>
<th>Number of Harvests</th>
<th>Total Leaf Produced Kgs.</th>
<th>Leaf Used for Rearing Kgs.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

D. Source Information of Sericulture:
   a) Serifed
   b) Sericulture Co-operative Society
   c) Neighbours
   d) Friends/Relatives
   e) Newspapers/Journals

E. Motivating Factor:
   a) Personal Interest
   b) Additional Income from Land
   c) To Avail Loan and Subsidy
   d) Incentives of Serifed
   e) Low Gestation
   f) Absorbing Family Labour
   g) Compensate Loss of other Crops

F. Plan to Expand

1. Have you got any plan to expand your Mulberry Cultivation? Yes / No
2. If yes, state the following:

<table>
<thead>
<tr>
<th>Approximate area planned</th>
<th>Probable date</th>
<th>Reason for expansion*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

4.Failure of agriculture.
3. If no, state the reason:
   a) No more Land
   b) No enough Family Labour
   c) Not Profitable
   d) Lack of Finance
   e) Mulberry/Silkworm Diseases
   f) Inadequate helps from Serified
   g) No Specific Reason

III INFORMATION OF SILKWORM REARING

1. Particulars of Rearing House:

<table>
<thead>
<tr>
<th>Nature of rearing house (✓ mark)</th>
<th>Area (sq.feet)</th>
<th>Year of construction</th>
<th>Cost Rs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Separate room</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b) Attached to the dwelling house</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c) Rearing in the house itself</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>d) Other (specify)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2. Source of Purchasing DFLs.:
   a) Serified
   b) Agencies outside Kerala
   c) Grainages of CSB
   d) Others (specify)

3. Variety of Silkworm:
   a) Bivoltine
   b) Multivoltine
   c) Others (specify)

4. Do you Experience any Difficulty in getting DFLs? Yes / No

5. If yes, specify the reason:
   a) Need for booking
   b) Shortage of DFLs.
   c) High Price
   d) Indifferent Attitude of Serified
   e) Need for long Traveling

6. Do you suffer from Crop Loss? Yes / No

7. If yes, number of losses (2004-05): 1 2 3 4 5
8. Specify Reason for Loss:
   a) Inferior Quality of DFLs.
   b) Climatic Problems
   c) Lack of Technical Assistance
   d) Poor Attention
   e) Silkworm Diseases
   f) Cannot Specify

9. Do you suffer from Shortage of Rearing Equipments? Yes / No

IV. INFORMATION ABOUT MARKETING OF COCOON

1. Does a Cocoon Market exist in your Village? Yes / No
2. How do you Market the Cocoons?
   a) Selling directly to the Serifed
   b) Selling Outside Kerala
   c) Selling to Intermediaries
   d) Selling to other Agencies (specify)

3. Distance to the nearest Cocoon Market: ........Km.
4. Do you find any drawback in the present system of purchasing of cocoons by Serifed? Yes / No
5. If yes, specify the drawbacks:
   a) Delay in payment of cash
   b) No system of Grading
   c) No better price for quality cocoons
   d) Fraudulent practices in weighing
   e) Distant location of collecting centre
   f) Others (specify)

6. Suggest an alternative method for selling cocoons:
   a) Establish cocoon market in every Panchayat
   b) Auction method of sales
   c) Establish Silk Exchanges
   d) Authorized agents must collect cocoons at home
   e) Others (specify)

V. INFORMATION ON FINANCING

1. Source of Fund for doing Sericulture:
   a) Own Funds
   b) Borrowed Funds
2. Source of Borrowed funds and their details:

<table>
<thead>
<tr>
<th>Source of loan</th>
<th>Year/s</th>
<th>Amount Rs.</th>
<th>Rate of Interest</th>
<th>Loan repaid Rs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Commercial bank</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b) Co-operative bank</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c) Land Development Bank</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>d) Money Lenders</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>e) Others (specify)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

3. If loan is not availed, specify reason:

a) No need
b) Approached but not given
c) Need of Security
d) Delay in sanctioning
e) Indifferent Officials
f) Not aware of Loans
g) No capacity of repay

VI. INFORMATION ON COST AND INCOME

A. Labour Cost:

<table>
<thead>
<tr>
<th>Operation</th>
<th>Family labour</th>
<th>Hired labour</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male No.</td>
<td>Female No.</td>
<td>Value Rs.</td>
</tr>
<tr>
<td>Planting mulberry</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rearing operation</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

B. Investment Costs:

<table>
<thead>
<tr>
<th>Item</th>
<th>Cost Rs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mulberry Plantation:</td>
<td></td>
</tr>
<tr>
<td>Labour: Rs.</td>
<td></td>
</tr>
<tr>
<td>Planting Material: Rs.</td>
<td></td>
</tr>
<tr>
<td>Rearing House</td>
<td></td>
</tr>
<tr>
<td>Rearing Equipments</td>
<td></td>
</tr>
<tr>
<td>Irrigation</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
</tr>
</tbody>
</table>
C. Cost of Rearing:

i) Material Cost

<table>
<thead>
<tr>
<th>Item</th>
<th>Quantity</th>
<th>Price</th>
<th>Value Rs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Farm Yard Manure</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chemical Fertilizers</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Disinfectants</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DFLs.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Others</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

ii) Charges:

<table>
<thead>
<tr>
<th>Item</th>
<th>Amount Rs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Repairs/Replacements</td>
<td></td>
</tr>
<tr>
<td>Electricity/Oil</td>
<td></td>
</tr>
<tr>
<td>Interest on Loans</td>
<td></td>
</tr>
<tr>
<td>Crop Insurance Premium</td>
<td></td>
</tr>
<tr>
<td>Others</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
</tr>
</tbody>
</table>

iii) Variable Cost of Rearing: Rs......................... (Labour for rearing+Material cost+Charges)

iv) Fixed Costs:

<table>
<thead>
<tr>
<th>Item</th>
<th>Amount Rs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annual Cost of Mulberry Plantation</td>
<td></td>
</tr>
<tr>
<td>Annual Cost of Rearing House</td>
<td></td>
</tr>
<tr>
<td>Annual Cost of Equipments</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
</tr>
</tbody>
</table>

v) Total Cost of Cocoon Production: (iii + iv): Rs.........................
vi) Cost of Marketing:

a. Transportation: Rs......................
b. Luggage: Rs......................
c. Others: Rs......................

vii) Sales Income from Cocoon:

<table>
<thead>
<tr>
<th>Frequency of Sales</th>
<th>No. of DFLs used</th>
<th>Output Kgs.</th>
<th>Average Price Rs.</th>
<th>Value Rs.</th>
</tr>
</thead>
</table>

viii) Net Income from Sericulture Activity:

<table>
<thead>
<tr>
<th>Item</th>
<th>Amount Rs</th>
<th>Total Rs</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Total receipts:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>i) Sale of cocoon</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ii) Comp. received from insurance co.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>iii) Income from family labour</td>
<td></td>
<td></td>
</tr>
<tr>
<td>iv) Other receipts</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Total expenditure:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>i) Cost of production</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ii) Cost of marketing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Net income (1 - 2)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

VII. EVALUATION OF THE ACTIVITIES OF SERIFED

Rate the following using a 5 point rating scale (✓ Mark):

1. Evaluation of Technical Assistance

a) Preparation of land
b) Planting mulberry
c) Manuring
d) Construction of rearing house
e) Rearing
f) Disinfection

Poor          Excellent

✓
2. Evaluation of Training:

| a) Planting mulberry |   |   |   |
| b) Leaf harvesting |   |   |   |
| c) Cleaning and disinfection |   |   |   |
| d) Feeding worms |   |   |   |
| e) Harvesting cocoons |   |   |   |

3. Evaluation of Marketing

| a) Grading of cocoon |   |   |   |
| b) Weighing |   |   |   |
| c) Pricing |   |   |   |
| d) Payment |   |   |   |
| e) Incentives/bonus |   |   |   |
| f) Subsidies |   |   |   |

4. Evaluation of Crop Insurance Scheme:

i) Do you join the Crop Insurance Scheme of Serifed? Yes / No

ii) If yes, give the following details:
   a) Number of batches reared:
   b) Number of insured batches:
   c) Number of failed batches:
   d) Amount of claim admitted:
   e) Time taken to settle claim:

iii) If no, state reason:
   1. High rate of premium
   2. Not available for small producers
   3. No timely settlement of losses
   4. No specific reason

5. Evaluation of Various Subsidies:

a) Are you aware of the subsidies provided by the Serifed? Yes / No
b) Have you ever received any subsidy for sericultural operations? Yes / No
c) Provide the following information if you have availed subsidies:
VIII. PROBLEMS OF SERICULTURE IN KERALA
(✓ the most important as you experience)

1. Mulberry Cultivation:
   1. Lack of irrigation facilities
   2. High cost of maintenance
   3. Increased cost of fertilizers
   4. Diseases of mulberry
   5. Non-availability of land
   6. Natural hazards/draught
   7. High cost of labour
   8. Scarcity of labour

2. Cocoon Production:
   1. Scarcity of DFLs
   2. Silkworm diseases
   3. Frequent crop failure
   4. Shortage of rearing appliances
   5. Irregular moulting of silkworms
   6. Poor quality of mulberry leaves
   7. Limited technical assistance
   8. Lack of electricity

3. Marketing:
   1. Exploitation of middlemen
   2. Absence of local buyers
   3. Difficulties of transportation
   4. No spot payment
   5. No price for inferior quality cocoons
   6. Fraudulent practices by buyers
4. Finance:

1. Indifferent attitude of bank authorities
2. Cumbersome procedure
3. Inordinate delay in availing loans
4. Ignorance of bank about the prospects of sericulture

IX. SUGGESTION FOR THE PROMOTION OF SERICULTURE INDUSTRY IN KERALA

1. Timely supply of DFLs/Mulberry cuttings
2. Supply of Chawki worms
3. Improvement of marketing facility
4. Financial assistance from banks
5. Fulfillment of the promises made by the Serified
6. Providing more practical training to farmers
7. Enhancing infrastructure for the processing of raw silk
8. Research wing for sericulture
9. Price for inferior quality cocoons
10. Any other suggestion (specify)
INTERVIEW SCHEDULE FOR INFORMATION FROM HEAD OFFICE/DISTRICT OFFICES OF SERIFED

FROM HEAD OFFICE:

1. Corporate Profile: 
   Formation
   Objectives
   Organization Structure

2. State Profile: 
   Mulberry Acreage
   Number of Farmers
   Cocoon Production
   Supply of DFLs
   Sericulture Co-operative Societies

3. District Profile: 
   Mulberry Acreage
   Number of Farmers
   Cocoon Production
   Supply of DFLs
   Reeling Units
   Weaving Units

FROM DISTRICT OFFICES:

1. District: 

2. Functions: 
   Technical Service
   Training
   Subsidies
   Marketing
   Supply of Equipments
   Supply of DFLs
   Promotion Activities

3. Technical Assistance: 
   Preparation of Land
   Planting Mulberry
   Manuring
   Construction of Rearing House
   Rearing
   Disinfection
4. Training given for:
- Planting Mulberry
- Leaf Harvesting
- Cleaning and Disinfection
- Feeding silk worms
- Harvesting cocoons

5. Various Subsidies:
- Planting Mulberry
- Construction of Rearing House
- Purchase of Rearing Equipments
- Purchase of Disinfectants
- Purchase of DFLs
- Insurance Premium
- Irrigation

6. Cocoon Procurement:
- Grading of Cocoons
- Price Fixation
- Incentives/Bonus
- Payment

7. Area Covered:
- Entire District
- Selected Panchayats
- Selected Taluks
- Selected Blocks

8. Technical Specification:
- Planting Mulberry
- Construction of Rearing Shed
- Rearing Equipment

9. Crop Insurance:
- Conditions
- Premium
- Compensation