付　属　資　料

１．ミニッツ（PDM、PO、プロジェクト組織図含む）

２．PDM（仮和訳）

３．会議参加者一覧

1．ミニッツ（PDM、PO、プロジェクト組織図含む）

MINUTES OF MEETINGS
BETWEEN
THE JAPANESE CONSULTATION STUDY TEAM
AND
THE AUTHORITIES CONCERNED OF THE GOVERNMENT OF INDIA
ON JAPANESE TECHNICAL COOPERATION
FOR THE PROJECT FOR STRENGTHENING EXTENSION SYSTEM FOR BIVOLTINE SERICULTURE IN INDIA

The Japanese Consultation Study Team (hereinafter referred to as "the Team"), organized by Japan International Cooperation Agency (hereinafter referred to as "JICA") and headed by Mr. Toshifumi Sakai, conducted survey from 12th March to 17th, 2003 in order to review Project Design Matrix (hereinafter referred to as "PDM"), to formulate the Plan of Operation (hereinafter referred to as "PO") and to have for discussion on major issues related to implementation of The Project for Strengthening Extension System for Bivoltine Sericulture in India (hereinafter referred to as "the Project ").

During its survey, the Team exchanged views, and had a series of discussions with Indian authorities concerned.

As a result of the discussions, the Team and the Indian authorities concerned agreed to recommend their respective Governments the matters referred to in the documents attached hereto.

17th March 2003
Bangalore

酒井利文

Mr. Toshifumi SAKAI
Resident Representative
India Office
Japan International Cooperation Agency

Mr. P. Joy OOMMEN
Member Secretary
Central Silk Board
Government of India

Witness

Commissioner for Sericulture, Karnataka State

for Commissioner of Sericulture, Andhra Pradesh State

for Director of Sericulture, Tamil Nadu State

17/3/03

THE ATTACHED DOCUMENT

1 Progress of the Project Activities

Both Indian and Japanese side confirmed progress of the activities from August 2002 to February 2003 as attached in Appendix 1 and 2.

The inputs by both sides are attached in Appendix 3 and 4.

2 Project Design Matrix

Both sides agreed to modify the Project Design Matrix (PDM) as attached in Appendix 5.

Both sides confirmed that the PDM and the PO are subject to change through the approval of the Joint Co-ordinating Committee Meeting, within the framework of the Record of Discussions signed on 30th April 2002 (hereinafter referred to as "R/D"), when necessary.

3 Plan of Operation

Both sides confirmed the Plan of Operation as attached in Appendix 6.

Both sides also confirmed the Annual Plan of Operation (hereinafter referred to as "APO") as attached in Appendix 7.

4 Monitoring and Evaluation

Both sides confirmed to jointly conduct following monitoring and evaluation activities as mentioned in the R/D and Memorandum of Understanding between Central Silk Board (CSB) and Department of Sericulture(DOS) s in three States, namely Andhra Pradesh, Tamil Nadu, and Karnataka , on 4th May 2002.

4.1 Regular Meetings

Conduct Bivoltine Cell Meeting(Monthly), Group Meeting(Bi-Monthly), Joint Meeting(Bi-Monthly), Quarterly Meeting(Quarterly) and Joint Co-ordinating Committee Meeting(Yearly).

The first Joint Co-ordinating Committee will be held between August and October 2003.

4.2 Report

Prepare "Achievement of Outputs" and "Progress of Activities for each Output" half-yearly. The contents of the Report are discussed in Bivoltine Cell Meeting and Quarterly Meeting.

4.3 Joint Evaluation

Conduct Joint Evaluation in FY 2004 and FY 2006.

5 Responsible Organisations

The organisations shown in the Appendix 8 will be responsible for the implementation of the Project.

The counterpart list of above organizations is attached as Appendix 9.

6 Other Major Points of discussions

6.1 Both sides confirmed that the operational cost of the Project other than JICA's inputs will be met by the Indian side.

6.2 Both sides confirmed that besides the equipment to be provided by JICA, the cost of development of infrastructure for Technical Service Centre(TSC)s, Sericultural Training School(STS)s, Basic Seed Farm(BSF)s, and Grainages identified under the Project will be met by DOSs and CSB respectively.

7 Recommendation by the Team

7.1 The Team highly appreciated the recent measures taken by the Government of India to stabilize the cocoon and raw silk price. The Team also suggested such measures in the future, when required.

7.2 The Team recommended to circulate the decisions made at regular meetings to all the staff concerned without delay for the effective implementation of the Project.

ATTACHMENT (Appendix)

1. Achievement of Outputs as of Feb.2003
2. Progress of Activities for each Output as of Feb.2003
3. Input by Indian side
4. Input by Japanese side
5. Project Design Matrix
6. Plan of Operations
7. Annual Plan of Operations (2003-2004)
8. Project Organisation Chart
9. List of Counterpart Personnel

APPENDIX 1

ACHIEVEMENT OF OUTPUTS AS OF FEB. 2003

OUTPUTS	INDICATORS	TARGET IN THIS TERM	ACHIEVEMENTS IN THIS TERM	REASONS, IF PLANNED TARGETS WOULDN'T BE SATISFIED
1. Action plan for promotion of bivoltine sericulture will be formulated.	1.1 CSB and DOS will jointly formulate action plan with necessary budget allocation.	Both CSB and DOSs to prepare action plan jointly to promote bivoltine sericulture in the targeted area	Under the Catalytic Development Programme (CDP), an allocation of Rs.11524.10 lakh has been made which includes shares of Central Silk Board (CSB) and the Departments of Sericulture (DOS) in the project states. Financial support is available under the CDP for 5 years starting from 2002-03 in the critical areas of establishing rearing facility, mulberry plantation, rearing equipment, assistance for supply of quality disinfectants, assistance for CRCs, assistance for cocoon grading and silk testing, assistance for multi end reeling machine, interest subsidy on working capital, etc. Besides, to support sericulture farmers to compensate fall in the price of cocoons from September 2002, Govt. of India on the request of Departments of Sericulture in the project area, sanctioned a sum of Rs.826.00 lakh and out of this allocation, a sum of Rs.268.04 lakh was released as CSB share to provide price incentives to the primary producers in the cocoon market @ Rs.10/- per kg over and above the price offered by the reelers. The scheme was operational up to December 2002.	Reasons for not achieving full target of farmers' coverage are due to: a) Severe drought like situation prevailing in the project areas. b) Prevailing low cocoon prices did not enthuse farmers to go in for bivoltine rearing. c) The TSCs are new for bivoltine; targeted number of farmers' coverage needs time.
	1.2 Facility development/ improvement plan for extension of bivoltine sericulture will be formulated with necessary budget allocation.	Necessary fund allocation to be made by CSB and DOSs to support bivoltine farmers under Catalytic Development Project (CDP) Schemes	CSB and DOSs cooperate to realize plans and policies for supporting activities of TSCs, Reeling TSCs, CRCs, STSs, Grainages, BSFs and farmers (training of staff, buildings, improvement of facilities and equipment, support price for cocoons and raw silk)	No shortfall.

2. Coordination/ collaboration mechanism among CSB and DOSs for extension of bivoltine sericulture will be established.	2.1 Information/ data regarding bivoltine sericulture will be compiled in BV Cells of each state.	Collect the information on bivoltine sericulture from each state to compile information in the Bivoltine Cells of CSB and DOS to share the information and also challenges	In the Bivoltine Cell meetings, information required have been collected, compiled and strategies discussed and accordingly information consolidated, while in the joint meetings, challenges to promote bivoltine sericulture were sorted out. The DOS and CSB have shared their experience for better coordination to realize the objectives of the Project	No shortfall.
	2.2 CSB and DOS will share plan and challenges.	do	do	
3. System for mass production of quality seed will be established.		The entire requirement of F1 bivoltine seed to be met by following system of mass egg production in the grainages of NSSP meeting the quality norms both at seed farmers and at grainages	Production of quality seed was organized in the Grainages of CSB following the system laid down, which includes, raising of basic seed, generation of quality seed cocoons and preparation of F1 dfls meeting the guidelines. The entire requirement of dfls during the 3 pre-trials were met by NSSP	No shortfall.
	3.1 Quality control guidelines will be introduced at P3 level and below.	Quality control guidelines are to be discussed	Nine BSFs were selected. Quality control guidelines are discussed from P3 level and below	
	3.2 Defective cocoon rate will be decreased at BSFs.	Survey of the BSFs to know the present condition of defective cocoon rate	Present defective cocoon rate in selected BSFs of NSSP is about 5.0 %.	
	3.3 Mixing of different races and sex will not occur.	Survey of Grainages to know the present rate of race mixing and accuracy in sex separation	In some of the DOS Grainages, lot of inaccuracy (mixing) in separation of male and female pupae are noticed	
	3.4 Pupation rate will be over 90 % at BSFs	Survey of BSFs to know the present level of pupation rate	Present pupation rate is about 88 % in BSFs of NSSP	
	3.5 Recovery rate of seed production will be over 25 % at BSFs (egg recovery).	Survey of BSFs to know the present recovery.	Present recovery rate of eggs is above 25 % in BSFs of NSSP	
	3.6 Seed farmers will increase the production of seed cocoon.	Survey of seed farmers to know the present condition of bivoltine seed cocoon production quantity	Present number of seed farmers, seed cocoon quantity and seed production quantity is 30, 22,000 kg, and 1170 kg in NSSP, respectively.	

	3.7 Training programme will be conducted for BSF/ Grainage.	Training programme of BSF/ Grainage staff and seed farmers will be prepared	Training program of BSF/Grainage staff and seed farmers was discussed and prepared in SSTL (1)Seed cocoon handling and large scale loose egg production technology for 15 days, 10 staff, 2 batch/year (2)Pupal sex separation for 3 days, 15 staff, 3 batch/year (3)Mother moth examination for 5 days, 15 staff, 3 batch/year (4)Acid treatment, egg preparation schedules and incubation technology for 6 days, 10 staff, 3 batch/year (5)Seed crop rearing 35 days, 15 seed farmers, 2 batch/year (6)Chawki rearing of seed crop for 8 days, 15 staff, 2 batch/year	
4. DOS staff will be equipped with necessary skills and knowledge for extension of bivoltine sericulture and training facilities will be improved for bivoltine sericulture.		Survey of STS to know the present facilities, equipment, training curriculum, text books and number of trained staff	After survey of STSs in Karnataka, Andhra Pradesh and Tamil Nadu, the criteria for model STS were made and the shortfall in facilities, equipment, training curriculum, text books and number of trained staff were identified	Training could not be organised for the entire targeted farmers due to identification of less number of farmers in the TSCs on account of the delayed start of the Project, severe drought and prevailing low price of F1 cocoons.
	4.1 The number of TSC and STS staff trained by CSRTI will be increased	Survey of the number of TSC and STS staff trained by CSR&TI and CSTRI	Total number of 80 TSC staff were trained by CSR&TI Total number of 10 STS staff were trained by CSR&TI Total number of 15 CSB staff were trained by CSR&TI Total number of 6 reeling technical staff were trained by CSTRI	

	4.2 CSRTI and DOS will formulate field oriented training curriculum/ materials.	Survey of the training curriculum/materials in the selected TSC and Reeling TSC Field oriented training curriculum/materials are formulated with CSR&TI and DOS	Four STSs of Karnataka, one each in Andhra Pradesh and Tamil Nadu have included bivoltine sericulture course in the curriculum. Bivoltine sericulture courses were programmed by each training institution **[At CSR&TI]** (1) Trainers training for STS 10 staff, 2 batches/year (2) Mulberry cultivation for TSC 15 staff, 3 batches/year (3) Silkworm rearing/disease control for TSC 15 staff, 3 batches/year (4) Silkworm race maintenance for DOS and CSB 15 staff, 2 batches/year **[At CSTRI]** (1) Bivoltine silk reeling for DOS & CSTRI 7 officers, 1 batch/year (2) Bivoltine silk reeling training for DOS & CSTRI 9 technical staff, 1 batch/year (3) Bivoltine silk reeling training for cocoon market 15 officers, 1 batch/year (4) Bivoltine silk reeling training for extension 20 staff, 2 batches/year (5) Bivoltine silk reeling training for 20 reelers, 3 batches/year	

			[**At STSs of Karnataka**] (1) Disinfection and mulberry garden maintenance for 30 farmers and 10 technical staff, 4 batches/year (2) Late age rearing and rotary mounting techniques for 30 farmers and 10 technical staff, 4 batches /year [**At STS of Andhra Pradesh**] (1) Disinfection and mulberry garden maintenance for 20 farmers, 5 batches/year (2) Late age rearing and use of rotary mounting techniques for 20 farmers, 5 batches/year (3) Intensive bivoltine training for 10 technical staff, 5 batches/year [**At STS of Tamil Nadu**] (1) Disinfection and mulberry garden maintenance for 20 farmers, 4 batches/year (2) Late age rearing and use of rotary mounting techniques for 20 farmers, 4 batches/year (3) Intensive bivoltine training for 10 technical staff, 4 batches/year (4) Sericulture "Quality Club" facilitators training for 20 technical staff, 2 batches/year (5) Sericulture "Quality Club" group co-ordinators awareness training for 20 farmers, 4 batches/year	

	4.3 Utilisation of improved training manuals.	Training manuals for bivoltine sericulture are to be improved	Training Manuals were translated into local languages, Question and Answer books are prepared and ready for printing. (1) Illustrated working process of new mulberry cultivation technology was translated from English into Telugu and Tamil and is under printing (2) Illustrated handbook on silkworm disease control technology was translated from English into Telugu and Tamil and is under printing (3) Illustrated working process of bivoltine hybrid loose egg production technology is translated from English into Kannada (4) Illustrated working process of bivoltine hybrid loose egg production technology in Kannada was prepared (5) Operation manual for reelers on bivoltine silk reeling technology was translated from English into Telugu. Tamil and Hindi books are under printing	
	4.4 The number of DOS staff trained at STS will be increased.	To increase the number of DOS staff trained at STS	75 DOS staff were trained in intensive bivoltine techniques (35 days course), disinfection and mulberry garden maintenance (6 days course), late age rearing and use of rotary mounting techniques (6 days course), sericulture Quality Club facilitators training (2 days course) at each STS	
	4.5 Farmers' confidence on trained extension staff will be improved	To improve farmers' confidence	A total of 280 farmers were trained in the above training courses in STSs. The farmers' confidence on extension staff will be studied by CSB through questionnaire.	
	4.6 The number of facilities equipped for bivoltine sericulture training will be increased.	DOS supports the facilities in selected STS for bivoltine sericulture	After survey in the STS, the criteria for model STS were made and the shortfall in facilities were listed out.	

5. Extension model for bivoltine sericulture will be established.		Survey for selection of TSCs, Reeling TSCs, CRCs, STSs, BSFs and Grainages in Karnataka, Andhra Pradesh and Tamil Nadu	Survey in Karnataka, Andhra Pradesh and Tamil Nadu was carried out and 18 TSCs, 1 Reeling TSC, 18 CRCs, 6 STSs, 9 BSFs, 11 Grainages were selected. Selection of remaining one Reeling TSC was postponed.till facilities are improved	
	5.1 Extension manuals in local languages will be utilized.	Existing manuals on bivoltine sericulture are to be prepared in local languages	(1) Existing manual of mulberry cultivation and disease control were translated from English into Telugu and Tamil and is under printing (2)Existing manual of bivoltine reeling technology was translated from English into Telugu, Tamil and Hindi and is under printing (3)Question & Answer for silkworm rearing, mulberry cultivation, disease control and bivoltine silkworm race maintenance were prepared (in English) for staff of TSCs and STSs and is under printing	
	5.2 Cooperative activities (i.e. management of chawki rearing house) will be conducted in targetted areas.	Survey of cooperative system in targeted areas	"Quality Clubs" in Karnataka, Andhra Pradesh, Tamil Nadu have been organized. Each "Quality Club" consists of 8 to 10 farmers. These "Quality Clubs" specially in Andhra Pradesh are promoting bivoltine technology in organizing CRCs.	
	5.3 Sericulture related tools such as rotary mountage will be locally produced.	Survey to the current situation for local production	Local manufacturers have been identified to prepare rotary mountages, incubation frame, deflossing machine, plastic trays, etc. The list of manufacturers is prepared.	

APPENDIX 2

Progress of Activities for each Output as of Feb. 2003

Progress of Activities										Progress and Problem in this term	Target and Activities in next term
Activities	Plan / Actual	7	8	9	10	11	12	1	2		
1. Formulation of action plan for promotion of bivoltine sericulture [Mainly implemented by CSB-BC, DOSs-BC]											
1-1 Baseline survey (on target farmers, current extension system, current extension plan, and government policy to support small sericulture farmers and to strengthen farmers group etc.) [Mainly implemented by CSB-BC, DOS-BC and CSR&TI]	P									Study on baseline survey should have been completed, but due to unavoidable situation in Karnataka and Tamil Nadu, the activities could not be completed	**Target:** The analysis on baseline survey will be completed. The result of base line survey will be reflected as a bench mark for evaluation of the impact of the project. **Activities Plan:** Collected data will be compiled as basic information, which helps in evaluating the progress of the project periodically .
	A										
1-2 Promotion of full introduction of cocoon marketing system with quality assessment [Mainly implemented by DOSs and CSTRI]	P									Promotion of full introduction of cocoon marketing system is a continuous process.	**Target:** Standardised selection criteria for evaluating raw cocoon based on silk ratio and defective cocoon percentage. **Activities Plan:** Standardisation of methods of cocoon evaluation, creating awareness among cocoon growers, marketing officers and silk reelers to be carried out.
	A										

Progress of Activities										Progress and Problem in this term	Target and Activities in next term
Activities	Plan	7	8	9	10	11	12	1	2		
	Actual	7	8	9	10	11	12	1	2		
1-3 To examine the needs for modification on current extension system, current extension plan, government policy to small sericulture farmers and to strengthen farmers. [Mainly implemented by CSB-BC, DOS-BC and CSR&TI]	P A										**Target:** Current extension system/plan and Govt. policies are towards promotion of bivoltine sericulture by supporting the farmers and strengthening of infrastructure. **Activities Plan:** Related papers will be analysed by CSB experts for further improvement if found necessary.
1-4 Action plan for promotion will be formulated with close coordination of CSB and DOSs [Mainly implemented by CSB-BC, DOSs-BC and CSR&TI]	P A									These activities could not be completed due to unavoidable situation prevailed in Karnataka and Tamil Nadu and due to non finalization of Institutions	**Target:** Formulation of plan of operation, preparation of annual action plan for the year 2003-2004 and working plan. **Activities Plan:** The plan of operation, action plan and model working plan will be prepared in consultation with JICA and DOS.
2. Establishment of coordination /collaboration mechanism among CSB and DOSs [Mainly implemented by CSB-BC and DOSs-BC]											
2-1 To formulate plan of activities for Bivoltine Cells [Mainly implemented by CSB-BC and DOSs-BC]	P A										Activity completed
2-2 To monitor project activities through regular joint meetings [Mainly implemented by CSB-BC and DOSs-BC]	P A										**Target:** The project activities will be monitored by organizing regular meetings. **Activities Plan:** The activities of the project will be monitored by organizing bivoltine cell meetings, joint meetings, quarterly meetings and JCC meeting.
3. Strengthening of system of seed production [Mainly implemented by NSSP and DOSs]											

Progress of Activities										Progress and Problem in this term	Target and Activities in next term
Activities	Plan	7	8	9	10	11	12	1	2		
	Actual	7	8	9	10	11	12	1	2		
3-1 To formulate plan for mass production of quality seed [Mainly implemented by NSSP and DOSs]	P									Activity Completed	
	A										
3-2 To establish one-way system at CSB and DOS [Mainly implemented by NSSP and DOSs]	P										**Target:** To establish one way system for basic seed multiplication. **Activities Plan:** One way system of multiplication of basic seed will be implemented for realizing original breed characters and avoiding mixing of races.
	A										
3-3 To establish quality control guidelines and checkpoints at P3 level and below [Mainly implemented by NSSP and DOSs]	P										**Target:** The quality control guidelines and check points will be prepared in consultation with JICA. **Activities Plan:** The guidelines and check points of BSFs and Grainages are prepared and adopted in selected BSFs and Grainages.
	A										
3-4 To formulate guidance plan to BSF and Grainage staff and seed farmers[Mainly implemented by NSSP, DOSs, SSTL and CSR&TI]	P										**Target:** The guidance plan of BSF and Grainage staff and seed farmers will be prepared and finalized. **Activities plan:** Formulate guidance plan to be adopted by BSF, Grainage staff, and seed farmers.
	A										

Progress of Activities										Progress and Problem in this term	Target and Activities in next term
Activities	Plan / Actual	7	8	9	10	11	12	1	2		
3-5 Strengthening of seed production facilities [Mainly implemented by NSSP and DOSs]	P A										**Target:** Facilities will be upgraded based on model BSF and Grainage. **Activities Plan:** The shortfall in facilities identified in pre-survey and JICA team survey in few units to be upgraded.
4. Strengthening of training [Mainly implemented by CSR&TI, CSTRI and DOSs]											
4-1 To formulate training master plan for bivoltine sericulture and reeling [Mainly implemented by CSR&TI, CSTRI, SSTL and DOSs]	P A									Training master plans were discussed to formulate by CSB experts and JICA experts	**Target:** Training master plan formulated by each institute and the curriculum prepared were fine tuned for imparting training. **Activities Plan:** The training master plan prepared by DOSs will be further fine tuned in consultation with CSB experts.
4-2 To formulate facility development plan [Mainly implemented by DOSs]	P A									The shortfall in facilities at each STS were identified by JICA team.	**Target:** The shortfall in facilities identified by JICA team will be upgraded by DOS. **Activities Plan:** DOS will upgrade facilities to make up shortfalls identified.
4-3 Strengthening of training facilities (by DOS) [Mainly implemented by DOSs]	P A									Training facilities are being strengthened at STSs by providing required inputs, such as audiovisual aids, development of mulberry garden and construction of rearing house and procurement of equipment	**Target:** The shortfall in facilities identified by JICA team will be upgraded by DOSs. **Activities Plan:** DOSs will upgrade facilities.

Progress of Activities										Progress and Problem in this term	Target and Activities in next term
Activities	Plan / Actual	7	8	9	10	11	12	1	2		
4-4 To revise training curriculum to be field oriented [Mainly implemented by CSR&TI, DOSs, CSTRI, and SSTL]	P A									CSB and JICA experts are revising the existing training curriculum to make it field oriented.	**Target:** To fine tune the curriculum prepared for imparting training to the technical staff and farmers **Activities Plan:** The curriculum prepared in consultation with the DOSs will be further fine tuned in consultation with CSR&TI, CSTRI, SSTL and JICA experts
4-5 To conduct trainer's training [Mainly implemented by CSR&TI]	P A									Trainer's training programmes have been planned by CSB experts.	**Target:** Trainers will be trained at CSR&TI. **Activities Plan:** The trainers of identified STSs will be trained at CSR&TI.
4-6 To conduct farmer's training (by DOS) [Mainly implemented by DOSs]	P A									Farmer's training programmes have been conducted at STS	**Target:** The identified farmers are to be trained at STSs. **Activities Plan:** The farmers will be selected in batches and trained.
4-7 To devise training curriculum and materials in each field [Mainly implemented by CSR&TI , CSTRI , SSTL and NSSP]	P A										**Target:** Training curriculum to be revised in consultation with JICA. **Activities Plan:** The training curriculum will be revised as per the need of the farmers and training will be imparted on revised curriculum.
4-7-1 Silkworm race maintenance/seed production [Mainly implemented by CSR&TI, SSTL and NSSP]	P A										
4-7-2 Mulberry cultivation [Mainly implemented by CSR&TI]	P A										

Progress of Activities										Progress and Problem in this term	Target and Activities in next term
Activities	Plan / Actual	7	8	9	10	11	12	1	2		
4-7-3 Silkworm rearing/disease control [Mainly implemented by CSR&TI]	P A										
4-7-4 Reeling [Mainly implemented by CSTRI]	P A										
4-8 To conduct training course for extension staff [Mainly implemented by CSR&TI, CSTRI and SSTL]	P A										**Target:** The technical staff of selected TSCs will be imparted training. **Activities Plan:** The technical staff will be short listed and trained in batches.
5. Establishment of model for bivoltine sericulture extension [Mainly implemented by CSB-BC, DOSs-BC and CSR&TI]	P A										
5-1 To select target TSCs (Mainly implemented by CSB-BC, DOSs-BC and CSR&TI)	P A									Surveys in Karnataka, Andhra Pradesh and Tamil Nadu were conducted and 18 TSCs, 1 Reeling TSC, 18 CRCs, 6 STSs, 9 BSFs and 11 Grainages were selected, while selection of remaining 1 Reeling TSC was postponed till facilities are improved.	Activity completed
5-2 To plan and implement model extension activities in the targeted areas [Mainly implemented by CSB-BC, DOSs-BC and CSR&TI]	P A									Guideline to instruct staff of DOSs and farmers was set up by CSB experts in selected areas. Criteria of model TSC and CRC were also drawn up.	**Target:** Establishment of bivoltine extension system in the targetted areas. **Activities Plan:** Establishment of model bivoltine extension system by CSB experts and preparation of technical pamphlet for farmers.

Progress of Activities										Progress and Problem in this term	Target and Activities in next term
Activities	Plan	7	8	9	10	11	12	1	2		
	Actual	7	8	9	10	11	12	1	2		
5-3 To tune up technical package developed by PPPBST [Mainly implemented by CSB-BC, DOSs-BC, CSR&TI, CSRTI, NSSP and SSTL]	P									Areas of improvement required, in the technical package developed by PPPBST, have been identified.	**Target:** Establishment of model bivoltine extension system in field. **Activities Plan:** Establishment of model bivoltine extension system by CSB experts and preparation of technical pamphlet for farmers by fine tuning technical package of PPPBST.
	A										
5-4 To prepare method of monitoring and evaluation for extension activities [Mainly implemented by CSR&TI and DOSs]	P									For baseline survey, survey items, schedule and survey area were set.	**Target:** Conduct baseline survey. **Activities Plan:** Conduct baseline survey and collect information.
	A										
5-5 Strengthening of TSC(DOS) [Mainly implemented by DOSs]	P									Indicate the facilities and manpower requirement for selected TSCs and CRCs to make them as model units.	**Target:** To create strengthening plan for selected TSCs. **Activities Plan:** Make plan for strengthening according to JICA requirement.
	A										

APPENDIX 3

CENTRAL SILK BOARD
BANGALORE-560068

STATEMENT SHOWING APPROXIMATE EXPENDITURE INCURRED BY PARTICIPATING UNITS ON IMPLEMENTATION OF PEBS UP TO DECEMBER 2002. (EXPENDITURE MET OUT OF NORMAL BUDGET)

Rs. In 100000

Sl.No	Name of Units	Expenditure Incurred.
1	CSR & TI, Mysore	2.21
2	NSSP, Bangalore	17.72
3	SSTL, Bangalore	1.05
4	CSTRI, Bangalore	2.82
5.	BV Cell, CSB, Bangalore	2.00
6.	DOS, Karnataka	169.30
7	DOS, Andhra Pradesh	40.38
8	DOS, Tamil Nadu	22.68
	TOTAL	258.16

APPENDIX 4

JICA Long Term Expert

No.	Name	Field	Period (D/M/Y)
1	Dr. Hiroaki YANAGAWA	Chief Adviser	11/8/2002-10/8/2004
2	Mr. Akira NISHIKORI	Coordinator	11/8/2002-10/8/2004
3	Mr. Soji AOMORI	Training	11/8/2002-10/8/2004
4	Mr. Hitoshi TSUCHIYA	Extension	11/8/2002-10/8/2004
5	Mr. Akio YAMAGUCHI	Race Maintenance/ Seed Production	8/9/2002-7/9/2004

JICA Short Term Expert 2002-03

No.	Name	Field	Period (D/M/Y)
1	Dr. Takeshi KAWARABATA	Technology Extension	17/10/2002-25/12/2002
2	Dr. Keisuke MASE	Silkworm Maintenance/ Multiply Technology	31/10/2002-25/12/2002
3	Dr. Shigeo IMANISHI	Silkworm Rearing/Disease Control Technology	31/10/2002-31/1/2003

JICA Counterpart Training in JAPAN 2002-03

No.	Name	Psition	Training Subject	Period (D/M/Y)	Main Training Places
1	Mr. Hameed Beig	AD, Karnataka	Silkworm Seed Production	4/11/2002-1/3/2003	Dainippon-sanshikai, Tsukuba
2	Dr. G.K. Srinivasa Babu	DD, NSSP, Bangalore	Silkworm Race Maintenance	4/11/2002-1/3/2003	NIAS, Matsumoto & Tsukuba
3	Mr. Arasappillai Mani	SRO, RSRS, Salem	Silkworm Rearing and Disease Monitoring	21/11/2002-1/3/2003	NIAS, Matsumoto & Tsukuba

JICA Country focused Training Course in JAPAN 2002-03

No.	Name	Psition	Training Subject	Period (D/M/Y)	Main Training Places
1	Mr. Jayant Jayaswal	JD, NSSP, Bangalore	Extension for Bivoltine Sericulture	10/9/2002-24/10/2002	TBIC, Gunma Pref., TIC
2	Mr. C.R. Chikkamath	Commissioner, Karnataka	Extension for Bivoltine Sericulture	16/9/2002-24/10/2002	TBIC, Gunma Pref., TIC
3	Mr. D. Subramanyam	AD, Andhra Pradesh	Extension for Bivoltine Sericulture	16/9/2002-24/10/2002	TBIC, Gunma Pref., TIC
4	Mr. R.K. Yadav	Director, Tamil Nadu	Extension for Bivoltine Sericulture	Canceled due to circumstances of Govt. of Tamil Nadu	

A4 Equipment provided by JICA (2002-03, procured in India)

No.	Name of equipment	Qty	Unit price(Rs.)	Amount(Rs.)
1	Vehicle	13	497,231.00	6,464,003.00
2	Generator	21	112,450.00	2,361,450.00
3	Motorcycle	18	40,921.00	736,578.00
4	Power Sprayer	21	19,500.00	409,500.00
5	Humidifier With Humidistart	42	15,000.00	630,000.00
6	Heater with Thermostart	42	8,253.00	346,626.00
7	Photocopy Machine	1	378,620.00	378,620.00
8	Room Cooler	21	8,699.00	182,679.00
9	Personal Computer	2	95,500.00 126,750.00	222,250.00
10	O.H.P	2	19,936.00	39,872.00
11	VCD	2	6,490.00	12,980.00
12	TV	2	21,600.00	43,200.00
			Total (Rs.)	11,827,758.00

A4 Equipment provided by JICA (2002-03, imported from Japan)

No.	Name of equipment	Qty	Unit price(Y)	Amount(Y)
1	Microscope	3	271,200.00	813,600.00
2	Mask	42	25,680.00	1,078,560.00
			Total (Y)	1,892,160.00

Equipment accompanied by JICA experts

No.	Item (Maker· Model etc)	Qty	Unit Price(Y)	Amount(Y)	Name of Expert
1	Thermometer,0 -50°C	2	23,300.00	46,600.00	A.Yamaguchi
2	Thermometer, MerculrialL, 0 -50°C	10	2,110.00	21,100.00	A.Yamaguchi
3	Sugar Meter, PR-101	1	85,500.00	85,500.00	A.Yamaguchi
4	Illuminance Meter, LX-1334	1	26,600.00	26,600.00	A.Yamaguchi
5	Oxygen Analyzero,0-100%,OM-25A	1	95,000.00	95,000.00	A.Yamaguchi
6	Senior for Thermorecorder, TR-3110	4	8,400.00	33,600.00	A.Yamaguchi
7	Mask Disposable,50 PCS in a Box	10	6,650.00	66,500.00	A.Yamaguchi
8	Standard Hydrometer	2	3,610.00	7,220.00	A.Yamaguchi
9	Range of graduation:1.000-1.120 Hydrometer	10	4,400.00	44,000.00	A.Yamaguchi
10	Ink Cartridge PMICIC(color)	5	1,330.00	6,650.00	A.Yamaguchi
11	Ink Cartridge MJIC7 (Black)	5	1,330.00	6,650.00	A.Yamaguchi
12	Personal computer Nec Lavieux LL750/3D	1	265,000.00	265,000.00	S.Aomori
13	Digital Camera Sony DSC-P71	1	56,000.00	56,000.00	S.Aomori
14	Thermo-Hygrograph ISUzu 3-4090-01	1	70,000.00	70,000.00	S.Aomori
15	Assman's Psychrometer IZUZU 3 -3125R-01	1	43,000.00	43,000.00	S.Aomori
16	AVR Swallow AVR-1000 E IKVA	1	28,000.00	28,000.00	S.Aomori
17	Kyboard Microsoft C17-00105	1	7,500.00	7,500.00	A.Nishikori
18	Mouse Electom M-BGUP2RBK	1	5,500.00	5,500.00	A.Nishikori
19	Lan Card Melco LPC-4 CLXL	1	3,500.00	3,500.00	A.Nishikori
20	Software Nortons system work 2002	1	12,500.00	12,500.00	A.Nishikori
21	Software Atoki 15	1	9,800.00	9,800.00	A.Nishikori
22	USB Hub Elecom HU-D4SSV 4 Port	1	9,500.00	9,500.00	A.Nishikori
23	Transformer Toyzumi KDA-60 60VA	1	6,500.00	6,500.00	A.Nishikori
24	Battery Pack Toshiba ZA2173P24	1	35,800.00	35,800.00	A.Nishikori
25	Toner Cartridge Epson LPA4ETC3	3	9,450.00	28,350.00	A.Nishikori
26	Ink Cartridge Canon BCI-201BKHC Black	10	850.00	8,500.00	A.Nishikori
27	Ink Cartridge Canon BCI-201Y Yellow	10	850.00	8,500.00	A.Nishikori
28	Ink Cartridge Canon BCI-201M Magenta	10	850.00	8,500.00	A.Nishikori
29	Ink Cartridge Canon BCI-201C Cyan	10	850.00	8,500.00	A.Nishikori
30	Personal Computer" PC-LM5003E)"NEC	1	272.00	272.00	H.Yanagawa
31	Inkjet Printer "PM-730C" Epson	1	21,000.00	21,000.00	H.Yanagawa
32	USB Cable"CB2" Epson	1	1,100.00	1,100.00	H.Yanagawa
33	Digital Camera"DSC-pg" Sony	1	85,500.00	85,500.00	H.Yanagawa
34	Voltage Regulator" SVC-1000 ND II" Matsunaga	1	31,000.00	31,000.00	H.Yanagawa
35	Soft ware "Ichitaro Ver.12" Justsystem	1	17,500.00	17,500.00	H.Yanagawa
36	Battery Pck "PC-VP-BP19" NEC	1	21,000.00	21,000.00	H.Yanagawa
37	PC Card Adaptor "MSAC-PC2n" Sony	1	6,800.00	6,800.00	H.Yanagawa
38	Memory Stick "MSA-128A"Sony	1	10,600.00	10,600.00	H.Yanagawa
39	Rechargeable Battery Pack "NP-FC10"Sony	1	4,900.00	4,900.00	H.Yanagawa
40	Black Charger "BC-VC10" Sony	1	7,000.00	7,000.00	H.Yanagawa
41	Black Ink Cartridge "IC1BK13W" Epson	3	2,210.00	6,630.00	H.Yanagawa
42	Color Ink Cartridge"IC5CL13W" EPSON	3	2,040.00	6,120.00	H.Yanagawa
43	Note Book Computer NEC Lm500/36	1	274,000.00	274,000.00	H.Yanagawa
44	Software ITITAROU12	1	18,500.00	18,500.00	H.Tsuchiya
45	AVR IATSUAGA SVC-1000ND2	1	32,000.00	32,000.00	H.Tsuchiya
46	Battery Pack NEC PC-VP-BP19	1	22,800.00	22,800.00	H.Tsuchiya
47	PC Card Adaptor Sony MSAC-PC2N	1	7,000.00	7,000.00	H.Tsuchiya
48	Et Cartridge LPA4ETC3	2	9,450.00	18,900.00	S.Imanishi
49	Photo conductor unit LPAR KUTS	1	9,000.00	9,000.00	S.Imanishi
50	Ink Cartridge IC5CL13W Colour	12	2,100.00	25,200.00	S.Imanishi
51	Ink Cartridge IC51BK13W Black	20	2,300.00	46,000.00	S.Imanishi
52	Ink Cartridge IC51BK02 Black	20	1,320.00	26,400.00	S.Imanishi
53	Ink Cartridge IC5CL02 Colour Black	20	1,820.00	36,400.00	S.Imanishi
54	The Ink ribbon for work processors IR-EW-R	30	790.00	23,700.00	S.Imanishi
55	AC power adapter AC-LS1	1	3,000.00	3,000.00	S.Imanishi
56	Inkjet Printer "PM-2200C" Epson	1	61,674.00	61,674.00	H.Yanagawa
			Total(Y)	1,878,366.00	

Project Design Matrix

Project Title: The Project for Strengthening Extension System for Bivoltine Sericulture in India.
Target Group: Bivoltine Sericulture farmers in target areas. Target Areas: Karnataka, Andhra Pradesh, Tamil Nadu.

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumption
(Overall Goal) Enhancing production and quality of bivoltine raw silk and thereby raising the income levels of farmers and reelers.	1. Bivoltine sericulture farmers in target areas will increase income from sericulture 2. The production of quality raw silk (above 2A level) in target areas will be increased.	·Reports/documents of CSB/DOSs. ·Baseline Survey ·Repeat Survey on farmers and reelers ·Data from Cocoon markets	·Policy of CSB and DOSs for promoting bivoltine sericulture will not be changed.
(Project Purpose) Extension system for bivoltine sericulture will be functional	1.The number of bivoltine sericulture farmers will be increased to 3,600 by the end of the project in target area 2. The quantity of bivoltine cocoon transaction in cocoon markets in target states increase to about 2000 MT from base year 2002 by the end of project 3. Production and supply of quality bivoltine seed will increase to 36 lakh dfls by the end of project 4.Selected TSCs, CRCs, STSs, BSFs and Grainages will acquire requisite facilities.	·Baseline Survey ·Reports of CSB/DOSs	·Price of quality bivoltine raw silk will not drastically fall. ·Demand for quality bivoltine raw silk will not decrease.
(Outputs) 1. Action plan for promotion of bivoltine sericulture will be formulated. 2. Coordination/collaboration mechanism among CSB and DOSs for extension of bivoltine sericulture will be established. 3. System for mass production of quality seed will be established. 4. DOS staff will be equipped with necessary skills and knowledge for extension of bivoltine sericulture, and training facilities will be improved for bivoltine sericulture. 5. Extension model for bivoltine sericulture will be established.	1-1. CSB and DOSs will jointly formulate action plan with necessary budget allocation. 1-2. Infrastructure development/improvement plan for extension of bivoltine sericulture will be formulated with necessary budget allocation on annual basis. 2-1.Information/data regarding bivoltine sericulture will be compiled annually at Bivoltine Cells in CSB and DOSs 2-2.Monthly Bivoltine Cell Meetings will be held regularly during the project period in order to share plan and challenges with CSB and DOSs 3-1.Hatching will be over 90 % in selected	·Baseline survey ·Quarterly reports ·Reports/documents of CSB/DOSs ·Repeat Survey on farmers and reelers ·Minutes of meetings ·Annual reports of CSB/DOSs.	·New disease will not breakout.

	BSFs and F1 seed will also have 90 % and above hatching. 3-2. Defective cocoon rate will be less than 5% in selected BSFs. 3-3. Mixing of different races and sex will not occur in selected Grainages 3-4. Pupation rate will be over 85% in selected Grainages 3-5. Recovery rate of seed from seed cocoons will be over 45g/kg in selected Grainages 3-6. Training program will be conducted for BSF/Grainage staff (200 participants /year) and seed farmers (30 farmers/year) in CSR&TI and SSTL 4-1. TSC staff (315 participants/ 5 years), STS staff (60 paticipants/5 years) and Reeling TSC staff (100 participants/5 years) will be trained by CSR&TI and CSTRI 4-2. Field oriented bivoltine sericulture training courses will be formulated in selected STSs (more than 2 courses/ STS) 4-3. Training materials will be improved and developed (textbooks in 5 subjects in local languages, training videos in 5 subjects in local languages and picture panels for selected STSs) 4-4. DOS staff (600 participants /5 years) will be trained at selected STSs 5-1. 9 booklets and 5 pamphlets in English and local languages will be utilized 5-2. The number of Chawki rearing houses managed by Quality Clubs in selected area will be increased from 40 as of 2002 to 100 in 5 years. 5-3. Sericulture related tools (rotary mountage, cocoon defloshing machine, cocoon cutting machine, leaf chopping machine and incubation frame) will be developed and introduced to BSFs, Grainages and farmers		

(Activites) 1. Formulation of Action Plan for Promotion of Bivoltine Sericulture. 1-1 Baseline Survey (Survey on target farmers current extension system, current extension plan and government policy to support small sericulture farmers and to strengthen farmers group, etc.) 1-2 Promotion of full introduction of cocoon marketing system with quality assessment 1-3 To examine the need for modification on current extension system, extension plan, Government policy to support small sericulture farmers. 1-4 Action Plan for promotion of bivoltine will be formulated with close coordination of CSB and DOSs. 2 Establishment of coordination/ collaboration mechanism among CSB and DOSs. 2-1 To formulate plan of activities for Bivoltine Cell. 2-2 To monitor project activities through regular Joint meetings. 3 Strengthening of system of Seed Production . 3-1 To formulate plan for mass production of quality seed. 3-2 To establish one-way system of seed multiplication at CSB and DOSs. 3-3 To establish quality control guidelines and checkpoints at P3 level and below. 3-4 To formulate guidance plan to BSF, grainage staff and seed farmers. 3-5 Strengthening of seed production facilities 4 Strengthening of Training 4-1 To formulate training master plan for bivoltine sericulture.	(Inputs) (Japanese side) 1. Dispatch of long-term experts Chief Advisor Coordinator Seed production Training Extension 2. Dispatch of short-term experts 3. Acceptance of Indian personnel for training in Japan. 4. Provision of machinery/ equipment , training tools, Others (Indian side) 1. Assignment of counterpart personnel Project Manager Deputy Project Manager Director of CSB institutions and DOSs Subject Matter Specialist (in necessary field) 2. Administrative personnel 3. Land, buildings and facilities necessary for the Project. 4. Budgetary allocation for local costs.	·Counterpart personnel of the Project will not be shifted. ·Trained CSB/DOSs staff will be fully utilized. ·Law and order in the target areas will not get worse. (Pre-condition) ·Bivoltine Cell will be established in CSB and target states. ·Memorandum of Understanding among CSB and DOSs on coordination/ collaboration mechanism for the Project will be signed. ·Counterpart personnel of CSB and DOSs who had trained during PPPBST will be utilized to the extent possible.

4-2 To formulate facility development plan 4-3 Strengthening of training facilities. 4-4 To revise training curriculum to be field oriented. 4-5 To conduct trainers training. 4-6 To conduct farmers training (by DOS) 4-7 To devise training curriculum and materials in each field 4-7-1 Silkworm race maintenance/seed production 4-7-2 Mulberry cultivation 4-7-3 Silkworm rearing/disease control 4-7-4 Reeling 4-8 To conduct training course for extension staff 5 Establishment of Model for Bivoltine Sericulture Extension. 5-1 To select target TSCs 5-2 To plan and implement model extension activities in the target areas. 5-3 To tune up technical package developed by PPPBST. 5-4 To prepare method of monitoring and evaluation for extension activities. 5-5 Strengthening of TSCs.		

APPENDIX 6

Plan of Operations

Activities (specified on the original PO)	Detailed Activity	Output
1. Formulation of action plan for promotion of bivoltine sericulture [Mainly implemented by CSB-BC, DOSs-BC]		
1-1 Baseline survey (on target farmers, current extension system, current extension plan, and government policy to support small sericulture farmers and to strengthen farmers group etc.) [Mainly implemented by CSB-BC, DOS-BC and CSR&TI]	1-1-1 Send out questionnaires (farming scale, facilities, equipment, economical and technological level, etc.) to selected farmers from TSC before and after the baseline survey 1-1-2 Study on present status of government (CSB and DOSs) policies for developing small sericulture farmers (It is compilation of policies in CSB and DOSs) 1-1-3 Study on present status of government (CSB and DOSs) policies for extending the bivoltine sericulture 1-1-4 Study on present extension system in the selected states 1-1-5 Details of the plan of CSB and DOSs for strengthening Quality Clubs and farmers' groups 1-1-6 Study on common silkworm facilities (rearing house, etc.) operated by farmer's groups	1-1-1 The practical action plan supported financially by CSB and DOSs for extending the bivoltine sericulture technique has been established and contributes to improve policies and budgets through the annual report from DOSs. 1-1-2 The baseline survey realizes the present status of bivoltine sericulture, government (CSB and DOSs) policies for developing small scale sericulture farmers, the extension plan for promoting bivoltine sericulture, and farmer's groups.
1-2 Promotion of full introduction of cocoon marketing system with quality assessment [Mainly implemented by DOSs and CSTRI]	1-2-1 Selection of criteria for evaluating raw cocoons 1-2-2 Establish a rapid and simple evaluation method of raw cocoons 1-2-3 Introduce new evaluation system of raw cocoons in cocoon markets	1-2-1 Cocoon markets in Karnataka, Andhra Pradesh and Tamil Nadu introduce an improved evaluation and trading system of raw cocoons. 1-2-2 The market price of raw cocoons will reflect the result of quality assessment.
1-3 To examine the needs for modification on current extension system, current extension plan, government policy to small sericulture farmers and to strengthen farmers [Mainly implemented by CSB-BC, DOS-BC and CSR&TI]	1-3-1 Examining present status of extension system and extension plan to clarify problems for improving small sericulture farmers starting bivoltine sericulture 1-3-2 Determine budget plan for the modification and development of equipment essential to small sericulture farmers	1-3-1 Further improvements of extension system and extension plan for small sericulture farmers are accomplished by DOSs 1-3-2 Financial aid plans to develop and to modify essential equipment for strengthening small sericulture farmers are completed by DOSs
1-4 Action plan for promotion will be formulated with close coordination of CSB and DOSs [Mainly implemented by CSB-BC, DOSs-BC and CSR&TI]	1-4-1 Preparation of the practical action plan for small sericulture farmers 1-4-2 Preparation of support plan to strengthen activities of TSC, Reeling TSC, STS, Grainage and BSF including facilities	1-4-1 CSB and DOSs cooperate to realize plans and policies for supporting activities of TSC, Reeling TSC, STS, Grainage and BSF (Training of specialists, buildings, improvement of facilities and equipment).

2. Establishment of coordination /collaboration mechanism among CSB and DOSs [Mainly implemented by CSB-BC and DOSs-BC]		
2-1 To formulate plan of activities for Bivoltine Cells [Mainly implemented by CSB-BC and DOSs-BC]	2-1-1 Bivoltine Cells of CSB and DOSs will collect practical activity plan (annual reports, statistics, surveys, etc.) in relation to bivoltine sericulture 2-1-2 CSB and DOSs prepare annual activity plan for publishing (PEBS-News Letter, annual report, etc.) and planning workshops for bivoltine sericulture technologies	2-1-1 CSB-BC and DOSs-BC work dynamically as the information and extension center for extending bivoltine sericulture. 2-1-2 CSB-BC and DOSs-BC coordinate in collecting and analyzing the sericultural information (annual reports, statistics, references, survey reports, etc.). 2-1-3 CSB-BC and DOSs-BC cooperate to publish annual reports and PEBS-News Letters, and also to organize workshops
2-2 To monitor project activities through regular joint meeting [Mainly implemented by CSB-BC and DOSs-BC]	2-2-1 CSB-BC and DOSs-BC will hold regular meetings for reviewing the progress of project activities (extension service, silkworm seed supply, chawki, rearing, disease control, cocoon harvest, raw cocoon quality, etc.)	2-2-1 CSB-BC and DOSs-BC realize correctly the progress of project activities (extension service, silkworm seed supply, rearing, disease control, cocoon harvest, raw cocoon quality, etc.) and the extension system of bivoltine sericulture technology can be improved effectively
3. Strengthening of system of seed production [Mainly implemented by NSSP and DOSs]		
3-1 To formulate plan for mass production of quality seed [Mainly implemented by NSSP and DOSs]	3-1-1 Determine the standard and select Grainage and BSF 3-1-2 Mass production plan of high quality silkworm seeds will be formulated adhering to the guideline for the production and quality control of silkworm seeds	3-1-1 The BSFs and Grainages will be selected for promotion of bivoltine sericulture 3-1-2 Grainages start mass production of high quality silkworm seeds according to the guideline for the production and quality control.
3-2 To establish one-way system at CSB and DOS [Mainly implemented by NSSP and DOSs]	3-2-1 The one way system for maintenance and multiplication of silkworm race is established by discrimination of male and female, and prevention of race mixing	3-2-1 The one way system eliminating race mixing and intra-race crossing has been accomplished
3-3 To establish quality control guidelines and checkpoints at P3 level and below [Mainly implemented by NSSP and DOSs]	3-3-1 Establishment of rearing techniques assuring more than 85% of pupation rate and 45g/kg seed cocoon (egg recovery) in grainage	3-3-1 Numerical targets in pupation and egg production rate are cleared
3-4 To formulate guidance plan to BSF staff, grainage staff and seed farmers [Mainly implemented by NSSP, DOSs, SSTL and CSR&TI]	3-4-1 Formulate guidelines for BSF, seed farmers and Grainage staff	3-4-1 Effective implementation of guidelines at different levels will increase the bivoltine silkworm seed production in selected seed production units.
3-5 Strengthening of seed production facilities [Mainly implemented by NSSP and DOSs]	3-5-1 Strengthen facilities and equipment in BSFs and	3-5-1 Strengthened facilities and equipment in BSFs and Grainages will help in production of silkworm seeds

	Grainages for quality seed production	meeting the norms and standards
4. Strengthening of training [Mainly implemented by CSR&TI, CSTRI and DOSs]		
4-1 To formulate training master plan for bivoltine sericulture and reeling [Mainly implemented by CSR&TI, CSTRI, SSTL and DOSs]	4-1-1 Determine the standard and select STSs 4-1-2 Formulate training master plan which emphasize practices for the bivoltine sericulture technology (mulberry culture, rearing, disease control, etc.) 4-1-3 Formulate training master plan for seed production 4-1-4 Formulate training master plan which emphasize practices for reeling	4-1-1 The STSs will be selected for imparting training to the farmers effectively 4-1-2 A training master plan which emphasizes the practice in the bivoltine sericulture technology increases efficiency of farmers and others after training.
4-2 To formulate facility development plan [Mainly implemented by DOSs]	4-2-1 Formulate a plan for developing training facilities especially for bivoltine sericulture practices including reeling	4-2-1 The plan assists developing the training facility for bivoltine sericulture practices including reeling
4-3 Strengthening of training facilities (by DOS) [Mainly implemented by DOSs]	4-3-1 DOSs strengthen training facilities and equipment especially for bivoltine sericulture practices including reeling	4-3-1 Strengthened training facilities and equipment will help in meaningful training to promote bivoltine sericulture practices including reeling
4-4 To revise training curriculum to be field oriented [Mainly implemented by CSR&TI, DOSs, CSTRI, and SSTL]	4-4-1 CSR&TI , CSTRI and SSTL in consultation with DOSs revise training curriculum which emphasize practices for the bivoltine sericulture and reeling technology	4-4-1 Revised training curriculum helps better understanding and mastering techniques in bivoltine sericulture and reeling
4-5 To conduct trainers' training [Mainly implemented by CSR&TI]	4-5-1 Conduct advanced training for STS staff	4-5-1 An advanced training for STS staff enhances the ability of staff in turn to train others effectively
4-6 To conduct farmers' training (by DOS) [Mainly implemented by DOSs]	4-6-1 DOSs conduct practical and efficient training for bivoltine sericulture farmers	4-6-1 Practical and efficient training increases the number of farmers mastering the bivoltine sericulture technology
4-7 To devise training curriculum and materials in each field [Mainly implemented by CSR&TI , CSTRI , SSTL and NSSP]	4-7 CSR&TI, SSTL and CSTRI in consultation with DOSs devise training curriculum and text books for the bivoltine sericulture technology (race maintenance, seed production, mulberry cultivation, rearing, disease control, reeling)	4-7 TSCs and STSs employ devised training curriculum, training materials and text books for the bivoltine sericulture including reeling technology
4-7-1 Silkworm race maintenance/seed production [Mainly implemented by CSR&TI, SSTL and NSSP]		
4-7-2 Mulberry cultivation [Mainly implemented by CSR&TI]		

4-7-3 Silkworm rearing/disease control [Mainly implemented by CSR&TI]		
4-7-4 Reeling [Mainly implemented by CSTRI]		
4-8 To conduct training course for extension staff [Mainly implemented by CSR&TI, CSTRI and SSTL]	4-8-1 CSR&TI, CSTRI and SSTL conduct recurrent training course for extension, BSF and Grainage staff 4-8-2 SSTL conduct practical and efficient training for bivoltine seed farmers	4-8-1 Recurrent training refreshes the knowledge and technique of extension, BSF and Grainage staff 4-8-2 Seed farmers will improve their knowledge and technique to help generation of quality cocoons
5. Establishment of model for bivoltine sericulture extension [Mainly implemented by CSB-BC, DOSs-BC, CSTRI, SSTL, NSSP and CSR&TI]		
5-1 To select target TSCs [Mainly implemented by CSB-BC, DOSs-BC, CSTRI and CSR&TI]	5-1-1 Determine the standard and select TSC, Reeling TSC, and bivoltine sericulture farmers in Karnataka, Andhra Pradesh and Tamil Nadu	5-1-1 Targets desirable for extending the bivoltine sericulture in Karnataka, Andhra Pradesh and Tamil Nadu are selected according to the standard
	5-1-2 Detailed brushing program for each crop with F1 seed requirement, organizing CRC and crop monitoring will be organized by CSR&TI, in consultation with DOSs and NSSP	
5-2 To plan and implement model extension activities in the targeted areas [Mainly implemented by CSB-BC, DOSs-BC CSTRI, SSTL and CSR&TI]	5-2-1 Identified institutions will prepare and publish extension manuals/ pamphlets written in local languages for model extension activities and promotion of bivoltine sericulture in selected area	5-2-1 Extension manuals in Kannada, Telugu and Tamil are available from DOSs in targeted areas
	5-2-2 Organization of enlightment program/ field days/ group discussions/study tour for promotion of bivoltine sericultue	
5-3 To tune up technical package developed by PPPBST [Mainly implemented by CSB-BC, DOSs-BC, CSR&TI, CSTRI, NSSP and SSTL]	5-3-1 Bivoltine sericulture technology package (race maintenance, seed production, mulberry cultivation, rearing, disease control, reeling) developed and certified by PPPBST will be fine tuned	5-3-1 Proven technologies will help in developing a model extension system suitable for bivoltine sericulture
5-4 To prepare method of monitoring and evaluation for extension activities [Mainly implemented by CSR&TI, CSTRI, SSTL and DOSs]	5-4-1 Establish the monitoring and evaluating method for the extension activity based on the baseline survey	5-4-1 Extension activities in TSCs are monitored and evaluated properly through the baseline survey and Joint Meetings.
5-5 Strengthening of TSC(DOS) [Mainly implemented by DOSs]	5-5-1 DOSs strengthen TSC according to the action plan	5-5-1 DOSs realize strengthening TSC (building, facility,

		equipment and human resource) for the extension service
	5-5-2 DOSs will promote establishment of CRCs as per the requirements linked to the commercial TSCs to organize young silkworm rearing	5-5-2 Extension activities for the bivoltine sericulture technology package are strengthened as planed

APPENDIX 7

Plan of Operation for the year 2003-2004

Activities for 2003-04	3	4	5	6	7	8	9	10	11	12	1	2	Remarks
1.Formation of action plan for promotion of bivoltine sericulture (Mainly implemented by CSB-BC,DOSs-BC)													
1-1 Baseline survey [on target farmers, current extension system, current extension plan, and government policy to support small sericulture farmers and to strengthen farmers group etc.) [Mainly implemented by CSB-BC, DOS-BC and CSR&TI]													●Compilation of baseline survey data becomes a bench mark for evaluation of the impact of the project ●The baseline survey realized the present status of bivoltine sericulture, government policies for developing small scale sericutlure farmers, the extension plan for promoting bivoltine sericulture, and farmers's groups
1-1-1 Send out questionnaires (farming scale, facilities, equipments economical and technological level, etc.) to selected farmers from TSC before and after the baseline survey													
1-1-2 Study on present status of government (CSB and DOSs) policies for developing small sericulture farmers (it is compilation of policies in CSB and DOSs)													
1-1-3 Study on present status of government (CSB and DOSs) policies for extending the bivoltine sericulture													
1-1-4 Study on present extension system in the selected states													
1-1-5 Details of the plan of CSB and DOSs for strengthening Quality Clubs and farmer's groups													
1-1-6 Study on common silkworm facilities (rearing house, etc.) operated by farmer's groups													
1-2 Promotion of full introduction of cocoon marketing system with quality assessment [Mainly implemented by DOS s and CSTRI]													

Activities for 2003-04	3	4	5	6	7	8	9	10	11	12	1	2	Remarks
1-2-1 Selection criteria for evaluation of raw cocoons													●Standardization of selection criteria for evaluating cocoon based on silk ratio and defective cocoon percentage ●Creation of awareness among cocoon growers, marketing officers and silk reelers
1-2-2 Study rapid and simple evaluation method of raw cocoons													●Study rapid and simple evaluation method at selectd cocoon markets
1-2-3 Introduce new evaluation system of raw cocoons in cocoon markets													
1-3 To examine the need for modification on current extension system, current extension plan, government policy to small sericulture farmers and to strengthen farmers [Mainly implemented by CSB-BC, DOS-BC and CSR&TI]													
1-3-1 Examining present status of extension system and extension plan to clarify problems for improving small sericulture farmers starting bivoltine sericulture													●To study the current extension system/plan and Government policies as a base to evolve and support mechanism for development of strengthening of infrastructure for promotion of bivoltine sericulture
1-3-2 Determine budget plan for the modification and development of equipment essential to small sericulture farmers													●Financial aid plans to develop and to modify essential equipment for strengthening small sericulture farmers are completed by DOSs
1-4 Action plan for promotion will be formulated with close cooordination of CSB and DOSs [Mainly implemented by CSB-BC, DOSs-BC and CSR&TI]													
1-4-1 Preparation of practical action plan for small sericulture farmers													●Practical action plan supported financially by CSB and DOSs for extending the bivoltine sericulture technique should be established.
1-4-2 Preparation of support plan to strengthen activities of TSC, Reeling TSC, STS, Grainage and BSF including facilities													
2. Establishment of coordination/collaboration mechanism among CSB and DOS [Mainly implemented by CSB-BC and DOSs-BC]													

Activities for 2003-04	3	4	5	6	7	8	9	10	11	12	1	2	Remarks
2-1 To formulate plan of activities for Bivoltine Cell [Mainly implemented by CSB-BC and DOSs-BC]													●Activity completed
2-1-1 Bivoltine Cell of CSB and DOSs will collect practical activity plan (annual reports, statistics, surveys, etc.) in relation to bivoltine sericulture													●Activity completed
2-1-2 CSB and DOSs Annual Report activity plan for publishing (PEBS-New Letter, annual report, etc.) and planning work shops for bivoltine sericulture technologies													●CSB-BC and DOSs-BC cooperate to publish annual report and PEBS-News Letters, and also organize workshops
2-2 To monitor project activities through regular joint meetings [Mainly implemented by CSB-BC and DOSs-BC]													
2-2-1 CSB-BC and DOSs-BC will hold regular meetings for reviewing the progres of project activities													●To organize the following regular meetings for effective monitoring of the project 1.Bivoltine Cell Meeting- once in a month 2.Group Meetings on seed production, training and extension 3.Joint Meeting-once in two months or after each crop 4.Quarterly Meeting- once in three months 5.Joint Coordinating Committee Meeting- once in a year 6.Informal meeting- as and when required
3.Strengthening of system of seed production [Mainly implemented by NSSP and DOSs]													
3-1 To formulate plan for mass production of quality seed [Mainly implemented by NSSP and DOSs]													●Activity completed
3-1-1 Determine the standard and select Grainage and BSF													●Activity completed
3-1-2 Mass production of high quality silkworm seeds will be formulated adhering to the guideline for the production and quality control of silkworm seeds													●Activity completed ●Preparation of action plan for produciton of 18 lakh dfls for five crops and production planning to meet the requirement of the project
3-2 To establish one-way system at CSB and DOS [Mainly implemented by NSSP and DOSs]													

Activities for 2003-04	3	4	5	6	7	8	9	10	11	12	1	2	Remarks
3-2-1 The one way system for maintenance and multiplication of silkworm race is established by discrimination of male and female, and prevention of race mixing													●Identification of needs of state BSFs, up gradation of facilities and establish one way system for seed multiplicaion at state BSFs
3-3 To establish quality control guidelines and checkpoints at P3 level and below [Mainly implemented by NSSP and DOSs]													●Preparation and finalization of guidance plan and check point
3-3-1 Establishment of rearing techniques assuring more than 85% of pupation rate and 45g/kg seed cocoon (egg recovery) in Grainage													●Creation of quality awareness amongst Grainage staff and seed farmers
3-4 To formulate guidance plan to BSF staff, Grainage staff and seed farmers[Mainly implemented by NSSP, DOSs, SSTL and CSR&TI]													●Preparation of guidance plan to staff of BSFs/Grainages and seed farmers ●Implementation of guidance plan at selected BSFs, Grainage and seed farmers
3-4-1 Formuate guidelines for BSF staff, Grainage staff and seed farmers													●Creation of quality awareness amongst the staff and seed farmers
3-5 Strengthening of seed production facilities [Mainly implemented by NSSP and DOSs]													
3-5-1 Strengthen facilities and equipment in BSFs and Grainages for quality seed production													●Identification of shortfalls and upgradation of facilities required for raising the standards of BSFs and Grainages
4. Strengthening of training [Mainly implemented by CSR&TI, CSTRI and DOSs]													
4-1 To formulate training master plan for bivoltine sericulture and reeling[Mainly implemented by CSR&TI, CSTRI, SSTL and DOSs]													
4-1-1 Determine the standard and select STSs													
4-1-2 Formulate training master plan which emphasizes practices for the bivoltine sericulture technology (mulberry culture, rearing, disease control, etc.)													
4-1-3 Formulate training master plan for seed production													
4-1-4 Formulate training master plan which emphasize practices for reeling													

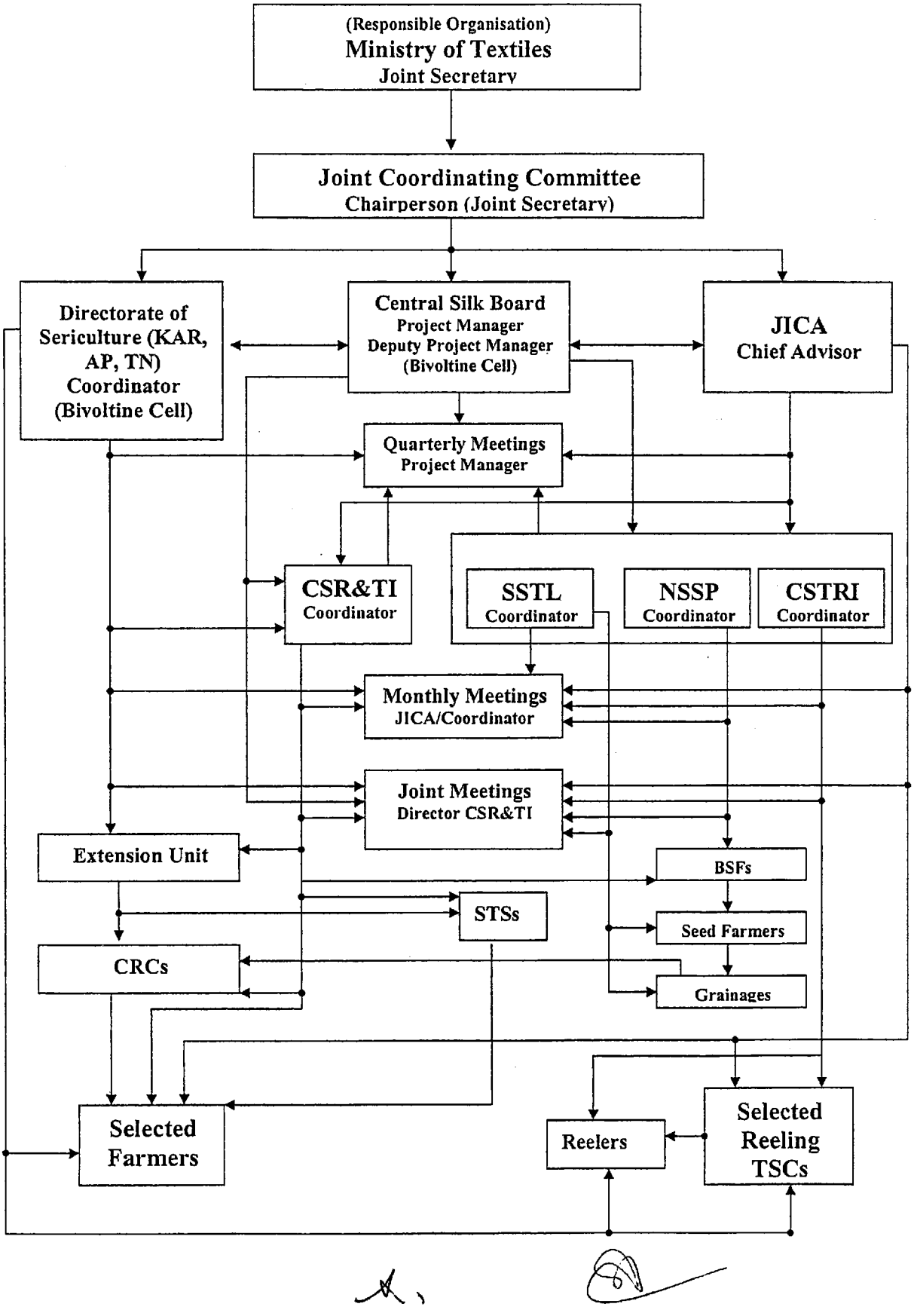
Activities for 2003-04	3	4	5	6	7	8	9	10	11	12	1	2	Remarks
4-2 To formulate facility development plan [Mainly implemented by DOSs]													
4-2-1 Formulate a plan for developing training facilities especially for bivoltine sericulture practices including reeling													
4-3 Strengthening of training facilities (by DOS) [Mainly implemented by DOSs]													
4-3-1 DOSs strengthen training facilities and equipment especially for bivoltine sericulture practices including reeling													●Upgradation of facilities including improvement of mulberry garden for making the STSs as a model
4-4 To revise training curriculum to be field oriented [Mainly implemented by CSR&TI, DOSs, CSTRI and SSTL]													
4-4-1 CSR&TI, CSTRI and SSTL in consultation with DOSs revise training curriculum which emphasize practices for the bivotine sericulture and reeling technology													●To fine tune the curriculum prepared for imparting training to the technical staff and farmers
4-5 To conduct trainer's training [Mainly implemented by CSR&TI]													
4-5-1 Conduct advanced training for STS staff													●20 trainers will be trained at CSR&TI
4-6 To conduct farmer's training (by DOS) [Mainly implemented by DOSs]													
4-6-1 DOSs conduct practical and efficient training for bivoltine sericulture farmers													●700 identified farmers will be trained at STS on Bivoltine sericulture technology
4-7 To devise training curriculum and materials in each field [Mainly implemented by CSR&TI, CSTRI and SSTL] CSR&TI, SSTL and CSTRI in consultation with DOSs devise training curriculum and text books for the bivoltine sericulture technology													●Revising of training curriculum in each field ●TSCs and STSs employ revised training curriculum, training materials and text books for the bivoltine sericulture including reeling technology
4-7-1 Silkworm race maintenance/seed production [Mainly implemented by CSR&TI, SSTL and NSSP]													
4-7-2 Mulberry cultivation[Mainly implemented by CSR&TI													

Activities for 2003-04	3	4	5	6	7	8	9	10	11	12	1	2	Remarks
4-7-3 Silkworm rearing/disease control [Mainly implemented by CSR&TI]													
4-7-4 Reeling [Mainly implemented by CSTRI]													
4-8 To conduct training courses for extension staff [Mainly implemented by CSR&TI, CSTRI and SSTL]													
4-8-1 CSR&TI, CSTRI and SSTL conduct recurrent training course for extension, BSF and Grainage staff													●About 120 technical staff of selected TSCs are proposed for training at CSR&TI ●25 participants will be trained at CSTRI ●200 participants will be trained at SSTL
4-8-2 SSTL conduct practical and efficient training for bivoltine seed farmers													●30 seed farmers will be trained at SSTL
5. Establishment of model for bivotline sericulture extension [Mainly implemented by CSB-BC, DOSs-BC and CSR&TI]													
5-1 To select target TSCs[Mainly implemented by CSB-BC, DOSs-BC and CSR&TI]													●Activity completed
5-1-1 Determine the standard and select TSC, Reeling TSC and bivoltine sericulture farmers in Karnataka, Andhra Pradesh and Tamil Nadu													Formulation of plan of operation with: ●Selection of farmers - 1,600 ●Number of crops proposed for rearing-5 ●Number of dfls proposed for chawki rearing-18 lakh
5-1-2 Detailed brushing program for each crop with F1 seed requirement, organizing chawki rearing and crop monitoring will be drawn by CSR&TI, in consultation with DOSs and NSSP													●5 Regular crop monitoring at every stages of crop rearing
5-2 To plan and implement model extension activities in the targeted area[Mainly implemented by CSB-BC, DOSs-BC and CSR&TI]													

Activities for 2003-04	3	4	5	6	7	8	9	10	11	12	1	2	Remarks
5-2-1 CSR&TI will prepare and publish extension manuals/pamphlets written in languages for model extension activities and promotion of bivotline sericulture in selected area													●Manuals are translated in local languages (Kannada, Telugu and Tamil) and utilized
5-2-2 Organization of enlightenment program/field days/group discussion /study tour for promotion of bivoltine sericulture													●Creation of quality awareness among the farmers through organizing enlightenment programme, field days, group discussions
5-3 To tune up technical package developed by PPPBST [Mainly implemented by CSB-BC, DOSs-BC, CSR&TI, CSTRI, NSSP and SSTL]													
5-3-1 Bivoltine sericulture technology package (race maintenance, seed produciton, mulberry cultivation, rearing, disease control, reeling) developed and certified by PPPBST will be fine tuned													●Full implementation of bivoltine sericulture package developed under PPPBST Project after finetuning
5-4 To prepare method of monitoring and evaluation for extension activities [Mainly implemented by CSR&TI and DOSs]													●Preparation of systematic methods of monitoring and evaluation of extension activities
5-4-1 Study the monitoring and evaluation method for the extension activity based on the baseline survey													●Extension activities in TSCs are monitored and evaluated properly through the baseline survey and Joint meetings
5-5 Strengthening of TSC(DOS) [Mainly implemented by DOSs]													●DOSs realize strengthening TSC (building, facility, equipment and human resource) for the extension service
5-5-1 DOS strengthen TSC according to the action plan													●Identification of deficiencies in selected TSCs and CRCs for upgrading
5-5-2 DOS will promote to establish CRCs as per the requirement linked to the commercial TSCs to organize young silkworm rearing													●Upgradation of facilities at TSCs and CRCs ●Upgradation of manpower and technical level of staff ●Creation of quality awareness amongst the staff

APPENDIX 8

ORGANISATIONAL CHART FOR IMPLEMENTATION OF THE PROJECT



APPENDIX 9

PROJECT FOR STRENGHTHENING EXTENSION SYSTEM FOR BIVOLTINE SERICULTURE (PEBS)

LIST OF COUNTERPARTS AS ON 15-03-2003

CENTRAL SILK BOARD

FIELDS	NOS	NAME & DESIGNATION	TRAINED UNDER	OLD/NEW
CSR&TI, MYSORE				
	1	1) Dr.S.B.Dandin, Director	-	Coordinator
MULBERRY CULTIVATION	8	1) Dr.A. Sarkar, JD	JICA	Old
		2) Dr. R.Balakrishna, DD	NSP	Old
		3) Dr.Govindaiah, DD	NSP	New
		4) Dr.T.Thippeswamy,SRO	NSP/JICA	old
		5) Mr.Vedavyasa,SRO	-	New
		6) Dr.R.K.Mishra,SRO	-	New
		7) Dr.Satish Varma,EE	-	New
		8) Dr.J.Kodandaramiah,SRO	-	New
SILKWORM RACE MAINTENANCE	9	1) Dr.H.K.Basavaraja, DD	JICA	Old
		2) Dr.S.Nirmalkumar, DD	JICA	Old
		3) Mr.P.G.Joge, DD	JICA	old
		4) Dr.G.V.Kalpana,SRO	JICA	Old
		5) Dr.N.Malreddy, SRO	JICA	Old
		6) Dr.Raghavendra Rao,SRO	-	New
		7) Smt.Premalatha,SRO	-	New
		8) Dr.N.Suresh Kumar,SRO	-	New
		9) Mr.Kariappa,DD	-	New
SILKWORM REARING	9	1) Dr.R.K.Rajan, DD	JICA	Old
		2) Dr.G.B.Singh, SRO	JICA	Old
		3) Dr.Chandrakanth,SRO	-	New
		4) Dr.M.V.Rao,SRO	-	New
		5) Dr.S.K.Aswath,SRO	.-	New
		6) Dr(Mrs) V.N.Sudha,SRO	-	New
		7) Mrs.Vijayakumari.SRO	-	New
		8) Mr.P.Sudhakar Rao,SRO	JICA	Old
		9) Dr.Ravindra Singh,SRO	JICA	Old
SILKWORM DISEASE CONTROL	6	1) Dr.B.Nataraju, DD	JICA	Old
		2) Dr.B.Venkatasubbaiah,SRO	NSP / JICA	Old
		3) Dr.Satya Prasad,SRO	-	New
		4) Mr.T.Selva Kumar,SRO	JICA	Old
		5) Dr.S.D.Sharma, SRO	JICA	Old
		6) Mr.K.Chandrasekharan,SRO	-	New

FIELDS	NOS	NAME & DESIGNATION	-	OLD/NEW
SERICULTURE TRAINING	7	1) Dr.R.G.Geetha Devi, JD	STUDY TOUR	Old
		2) Mrs. G.S.Vindhya, DD	-	Old
		3) Dr.Himantaraj,SRO	JICA	Old
		4) Dr.K.V.Rahamatulla, SRO	-	Old
		5) Mrs.K.Jhansi Lakhsmi, SRO	NSP	Old
		6) Dr.V.P.Gupta,SRO	-	New
		7) Dr.G. .Sreenivas,SRO	-	New
SERICULTURE EXTENSION	7	1) Mr..N.B. Vijayaprakash, JD	UNDP	Old
		2) Dr.B.Mallikarjuna, SRO	NSP/ JICA	Old
		3) Mr.P.Kumaresan, SRO	-	Old
		4) Dr.V.B.Mathur,SRO	JICA	Old
		6) Dr.Hiriyanna,SRO	-	New
		7) Smt.G.S.Geetha,SRO	-	New
RSRS.Bangalore	5	1) Dr.T.M.Veraiah,JD	STUDY TOUR	New
		2) Mr.Jaishankar, DD		New
		3) Dr. N. Shiva Shankar,SRO		New
		4) Dr.P. Rama Mohan Rao,SRO		New
		5) Mrs R.Shanthala,SRO		
RSRS, Chamrajanagar	2	1) Mr.R.K.Subramanyam,DD		New
		2) Dr.Srikantha Swamy,SRO		New
REC Chitradurga	1	1) Mrs .Suma,SRO		New
RSRS Salem	4	1) Dr.S.M.Quadri,JD		New
		2) Mr.Tirunavukarasu,SRO		New
		3) Mrs.Dhaahira Beevi,SRO		New
		4) Mr.Mani,SRO		New
REC,Krishnagiri	1	1) Mr.Samudravelu,SRO		New
RSRS, Ananthapur	5	1) Mr.S.Amarnath,JD	NSP	New
		2) Dr.Kasi Reddy,SRO		New
		3) Dr.Picchi Reddy,SRO		New
		4) Mr.M.Subba Rao,SRO		New
REC,Rayachoty		5) Dr.G.V.Prasad,SRO		New
SSTL, Bangalore	1	Dr.C.K.Kamble,Director	-	Coordinator
	11	1) Mr.N.Jagadeesh, SRO	JICA	Old
		2) Mr.B.S.Angadi,DD	JICA	Old
		3) Mr.M.R.Subramanyam SRO	-	Old
		4) Mr.P.Jayaramaraju, SRO	JICA	Old
		5) Mrs.S.T.Christiana, SRO	-	Old
		6) Mr.Y.V.Ramanjaneyulu,SRO	-	New
		7) Dr.G.V Reddy,SRO	JICA	Old
		8) Dr.T.O.Sasidharan,SRO	JICA	Old
		9) Dr.S.K.Bhargava,SRO	-	New
		10) Mrs. K.L.Philomena,SRO	-	New
		11) Mr.A.G.K.Daniel,SRO	-	New

FIELDS	NOS	NAME & DESIGNATION	TRAINED UNDER	OLD/NEW
NSSP, Bangalore				
	1	1) Dr.K.V.Benchamin, Director	-	**Coordinator**
	14	1) Dr.M.Baig,DD	JICA	Old
		2) Dr.G.K.Srinivasa Babu, DD	JICA	Old
		3) Sri.Satyanarayana Raju,DD	NSP	New
		4) Dr.D.S.Chandrasekhar,DD	-	New
		5) Mr.J.Somireddy, SRO	JICA	Old
		6) Dr.B.A.Parthasarathy, SRO	JICA	Old
		7) Mr.Shankara, SRO	JICA	Old
		8) Mr.L.V.Srinivasan, AD	JICA	Old
		9) Mr.Mallikarjuna, SRO	NSP&JICA	Old
		10) Mr.H.V.Raju, SRO	NSP	Old
		11) Ms.Sabita,SRO	-	New
		12) Mr.T.Ramanaiah,SRO	-	New
		13) Mr.Parameswara,SRO	-	New
		14) Mrs.T.D.Jyothi,SRO	-	New
CSTRI, Bangalore				
	1	1) Dr.T.H.Somashekar, Director		**Coordinator**
SILK REELING	10	1) Mr.G.Hariraj, SRO	JICA	Old
		2) Mr.Subhash V.Naik, SRO	JICA	Old
		3) Mr.K.N.Mahesh, SRO	JICA	Old
		4) Mr.Prakash N.Bhat, SRO	JICA	Old
		5) Mr.Subrata Roy,JD	Japan	New
		6) Dr.B.V.Vasumathi,SRO	-	New
		7) Mr.Aswatha Reddy,SRO	JICA	Old
		8) Mrs.Nivedita,SRO	-	New
		9) Smt.Jameela Khatoon,SRO	Netherland	New
		10) Mr.S.N.Shillin,SRO	-	New
CSB, Bivoltine Cell	1	Mr.Jayant Jayaswal, JD	JICA	**Coordinator**
	1	Dr.K.Giridhar,DD	-	**Dy.Coordinator**
	3	1) Mr.H. Jagadish Prabhu,SRO	-	New
		2) Mr.R.C.Das,Asst.Supt(Tech)	STUDY TOUR	Old
		3) Mr.R.Dileep Kumar.Asst.Supt(T)	-	New

FIELDS		NAME & DESIGNATION		OLD/NEW
DOS,KARNATAKA				
BV CELL	1	Mr.C.R.Chikkamath,COS	JICA	**Coordinator**
	4	1) Mr.N.M.Kanyadi,Addl.Director	KSP	New
		2) Dr.H.S.Prakash,DD & Head	KSP	Old
		3) Mr.Mustafa Ali Khan,ADS		New
		4) Mrs.B.Seema,SEO		Old
GRAINAGES	5			
Mandya		1) Mr.S.K.Ghori,DD	KSP	New
Tumkur		2) Mr.S.J.Azam,DD	KSP	New
Kolar		3) Mr.H.Beig,AD	JICA	New
Chintamani		4) Mr.Chikkarangaiah,ADS		New
Tandavapura		5) Mr.Sampath Kumar,ADS		New
BSF	4			
Kumbharahalli		1) Mr.M.Nagaraju,SEO		New
Chikkonahalli		2) Mr Y.N.Chigiri,ADS		Old
H.Malligere		3) Mr.Afsar Babu, ADS I/C		New
K.P.Doddi		4) Mr.Puttaswamy, SEO		New
STS				
Channapatna	4	1) Mr.B.S.Subramanya,DD	NSP	New
Hassan		2) Mrs.L.Rekha,DD	KSP	New
K.R.Pet		3) Mr.K.T.Thipperudrappa,DD	NSP	New
Kuderu		4) Mr.Nagaraju,DD	NSP	New
TSCs				
Bangarpet	15	1) Mr.S.N.Srinivasa,SEO		New
		2) Mr.Nagesh Rao, ADS *		New
Kolar		3) Mr.M.R.Reddy,SEO		New
		4) Mr Rudrappa, ADS*		New
Kanakapura		5) Mr.K.Jagadish,SEO	JICA	Old
		6) Mr. Venkatesh, ADS *		New
Arkalgud		7) Mr.B.Rajagopal,SEO		New
		8) Mr Chandra Murthy, ADS*		New
Thoreshettihalli		9) Mr.D.G.Manjunath,SEO		New
Koppa		10) Mr.T.Ballaiah,SEO		New
		11) Mr Bheemappa, ADS *		New
Holavanahalli		12) Mr.C.E.Nagaraju,SEO I/C		New
		13) Mr Rangappa, ADS *		New
Mandya		14) Mr.K.T.Venkatesh, SEO		New
		15) Mr Afsar Babu, ADS*		
TSC(Reeling)		* **Nodal Officer**		
Ramanagaram	2	1) Mr.Shivanagendra Babu,ADS		New
Shidlaghatta		2) Mr.A.J.Sharieff,SEO		New

FIELDS		NAME & DESIGNATION		OLD/NEW
DOS,ANDHRA PRADESH				
BV Cell	1	Mr I. Venkateswarlu,COS	Study Tour	**Coordinator**
	3	1) Mr.B.Chandra Sekhar,JD	NSP	New
		2) Mr.C.Venkata Subbaiah, ADS	-	New
		3) Mrs.D.Vani, Inspector of Seri.	-	New
BSF(Kalyandurg)	1	Mr.P.Sadasiva Reddy, ADS	-	New
Grainage				
Palamaner	2	1) Mr.O.Dhanaraj,ADS	-	New
Penukonda		2) Mr.M.Eswaiah,ADS	-	New
STS	1	Vacant		
TSCs				
Angallu	6	1) Mr.C.Manohar Reddy,ADS	NSP	New
Palamaner		2) Mr.O.Dhanaraj,ADS	-	New
V.Kote		3) Mr.N.S.Reddy,ADS	-	New
Penukonda		4) Mr.E.Eswaraiah,ADS	-	New
Hindupur		5) Mr.S.Rampratap Reddy,ADS	NSP	New
Gudibanda		6) Mr.D.Subramanyam, ADS	JICA	Old
Seed Area		Mr. N.Manoharan, DD	-	New
		Mr.R.Prabhakar, JD		New
		Mr.D.Jayaramappa, JD		New
		Mr.Malakonda Reddy, DD	-	New
DOS,TAMIL NADU				
BV Cell	1	Mr.Rakesh Kumar Yadav,DOS		**Coordinator**
	2	1)Mr.L.S.Ramaswamy,JD	STUDY TOUR	Old
		2) Mr.T.Muthaiah,DD	-	New
BSF				
Avalapalli	1	Mr.B.Sundar,ADS	NSP	New
Graianges				
Coimbatore	1	Mr.I.Devasahayam,ADS		New
STS				
Hosur	1	Mr.S.Veerabhadraswamy,DDS	NSP	New
TSCs				
Hosur	4	1) Mr.V.Purusothamdas,ADS	NSP	New
Krishnagiri		2) Mr.K.Jayakumar,ADS		New
Pappireddipatty		3) Mr.S.Chokkalingam,ADS	NSP	New
Satyamangalam		4) Mr.V.S.Raj,ADS	NSP	New