

DEPARTMENT OF SERICULTURE, ANDHRA PRADESH.

INTRODUCTION.

Andhra Pradesh has many traditionally rich silk Handloom Weaving Centres like Dharmavaram, Pochampally, Peddapuram, Gadwal, Narayanpet, Cuddapah, etc., The traditional, heavy, broad bordered rich with butta sarees of Dharmavaram have world wide popularity. Similarly the tie & dye Jamadhani fabrics & silk. sarees produced in Pochampally are World renowned and are earning lot of Foreign exchange. There are 35,000 Nos. of Silk Handlooms in Andhra Pradesh. The highest concentration is in Dharmavaram (Ananthapur) Cuddapah and Pochampally in Nalgonda District.

Sericulture is an agro based labour intensive industry providing gainful employment mostly to rural people. Andhra Pradesh occupies 2nd position in the country in production of silk. Sericulture enterprise in its totality, is a long chain industry. On the farm, two basic biological processes are put into operation, one is mulberry cultivation and the other one is cocoon production. On the Non-farm, industrial activities such as silk reeling, twisting, processing weaving etc are involved.

WHY SERICULTURE ?

- A potential employment generating rural cottage industry.
- Unlike other horticulture crops, Mulberry gives quick yields with low gestation period of 3 to 4 months.
- * Mulberry is a perennial plant and can survive for 10 to 15 years.
- * Can give 5 to 6 harvests in an year thus ensuring periodical returns.
- * Since drought resistant it can be cultivated in drought prone areas like Rayalaseema Dists.
- * Most of the sericulture activities such as mulberry cultivation, Silkworm rearing, Reeling, Twisting and Weaving are practised as house hold activities.
- * Participation of women to greater extent i.e., upto 60%.
- * Rural woman can conveniently practise since Sericulture activities require delicate handling which is a natural gift to most women..
- * Useful in preparing dress materials, upholstery, sarees, dhothis
- * Useful as sutures in Medical industry
- * Useful as feed for fish and Poultry.
- Arrests flocking of rural work force to urban or city areas and helps in circulation of wealth from rich to poor.

ORIGIN OF THE DEPARTMENT AND ITS EVOLUTION

Originally the Sericulture industry was one of the branches in Industries department and subsequently it was brought under Handlooms & Textiles department as one of the wings. Andhra Pradesh was a mere speck on the sericulture map of India, producing only around 300 tonnes of mulberry silk cocoons in 1975. The Sericulture industry grew with leaps and bounds and by the year 1981 A.P., could produce around 7000 metric tonnes of cocoons. In view of enormous growth of the industry, Sericulture was separated from Handlooms & Textiles and a separate department of Sericulture was formed in the year 1981 with a senior IAS officer as the Director of Sericulture. The growth of the department over a period of the time is shown hereunder.

S.No	I T E M	ACHIEVEMENT MADE		
		1975-76	1981-82	1997-98
1	Acreage under mulberry (acres)	4890	63,819	95,211
2	Production of cross breed silkworm eggs (in lakhs nos)	5.037	78.99	229.758
3	Production of reeling cocoons (tonnes)	328	7891	24809
4	Raw silk production based on cocoon production (tonnes)	234	858	2696
5	Actual silk production in the State (tonnes)	--	127	431

The above table shows the profile of the growth of the industry in the State. This phenomenal development has been possible because of the State Government's decision to form a separate Department of Sericulture in the year 1981, and subsequently, the department's strategy of promoting sericulture development as a poverty alleviation programme through integrated action by various departments. After the separate department of sericulture was formed, the Department of Rural Development was roped in to fund the major portion of the infrastructure needed to sustain this industry in the State through the Drought prone Areas Programme and the Integrated Rural Development Programme. In addition to infrastructure support, subsidy for coverage of small and marginal farmers and weaker sections was also made available from these programmes to promote credit flow to this sector. In view of the near instantaneous and visible impact of these programmes, from the year 1983-84 the Departments of Social Welfare and Tribal Welfare also stepped in, treating sericulture as a major scheme for the economic uplift of SCs and STs. In subsequent years, other Departments viz., Panchayat Raj, Revenue, Agriculture and Forest, have also played a supporting role. In addition to the above the External Aided Projects, such as World Bank aided National Sericulture Project and Swiss Development Mission have also contributed greatly for the development of Sericulture industry in the State. The persons involved in this industry are mostly small and marginal farmers and economically weaker sections of society. Another notable feature of the industry is that 60% of its working force comprises women. Today, A.P., is the second largest producer of cocoons in the country, with an annual production of 24,809 metric tonnes and providing employment to approximately 4.76 lakh persons.

Andhra Pradesh has the privilege of producing another type of silk called Tasar silk apart from mulberry, which is locally called as dasali pattu. Tasar is produced mainly by the tribal who takes the laying and rear them on the trees of Terminalia plantation. Tasar is concentrated mainly in the districts of Telangana i.e., Adilabad, Karimnagar, Warangal and Khammam and in few pockets of north coastal region of East. Godavari and Visakhapatnam. Tasar crop is raised thrice in a year. First and Second crops are seed crops where as third crop is a commercial crop. The details are furnished below:

<u>Crop</u>	<u>Period</u>
I Crop	July - August
II Crop	Sept - October
III Crop	Nov - January

ROLE OF THE DEPARTMENT

The role of the department is to ensure the following aspects necessary for the over all development of the sericulture industry.

1. Production of seed through an organised 3 tier system of seed multiplication.
2. Production of quality Cross breed Disease Free Layings in well established Grainages for supply to the farmers
3. Identification of new farmers and supply of high yielding mulberry cuttings / saplings to the new farmers.
4. Arranging loans, subsidies to small and marginal farmers, including SCs and STs through Banks and DRDA.
5. Educating Bankers by organising workshops, training programmes for releasing timely financial assistance to farmers.
6. Organisation of farmers meets, study tours to the farmers of traditional and non-traditional areas.
7. Transferring package of practices of mulberry cultivation, improved techniques of silk worm rearing, disease control methods through Audio Visual aids under Mobile farmers training units.
8. Organising Mass disinfection programme to control Pebrine, a dreadful disease which affects silk worms.
9. Supply of fertilisers, pesticides, R.K.O. bleaching powder, etc.,
10. Promoting private Chawkie Rearing units for supply of Chawkie worms in private sector.
11. Training new farmers and updating the new technology through Regional Training Centers.
12. Publication of booklets, Pamphlets, wall posters in Regional language.
13. Providing marketing facilities to farmers through cocoon markets and broadcasting of cocoon rates of different markets through different media.
14. Organising Cocoon Testing Units for assessing quality parameters like shell ratio, renditta etc., of cocoons in the cocoon markets.
15. Running of the Silk Reeling Units to intervene in the Cocoon Markets to avoid exploitation of cocoon buyers in the Markets.
16. Imparting training in Silk reeling to entrepreneurs for promoting Reeling / Twisting in private sector.
17. Providing training to lower staff at Regional Training Centres for improving their technical skills.
18. Organisation of silk weavers co-operatives societies for the benefit of weavers.

The department is broadly implementing the following schemes.

S.No	Scheme	Major objective
1	Plan	<p>Normal State Plan schemes:-</p> <p>Maintenance of departmental units which are useful to the sericulturists, Reelers, Twisters and weavers.</p> <p>Human resource development programmes for increasing work efficiency of Officers / staff , sericulturists, Reelers, Twisters and weavers.</p> <p>Mass disinfection programme to control the silk worm diseases.</p> <p>Assistance for construction of rearing sheds</p> <p>Assistance for establishment of drip for mulberry gardens.</p>

		<p>Assistance to farmers for providing subsidy for purchase of Bivoltine layings and revival package to drought effected farmers.</p> <p>Assistance for development of Non-farm sector units such as Interest subsidy on working capital loans and providing of production incentive to reeling units.</p> <p>Procurement of tasar cocoons for production of Tasar Dfls.</p> <p>Consultancy to NABARD and SERIFED for development of post cocoon activities and new designs in silk weaving.</p> <p>Research & Development.</p> <p>Centrally Sponsored Schemes:-</p> <p>Market Development Assistance, Thrift cum savings and security scheme, Project Package Scheme, Interest subsidy to silk weaver Cooperative societies and Deendayal Hatkargha Protsahan Yojana.</p> <p>Rebate to Handloom Agency for sale of handloom cloth.</p> <p>Implementation of Central Silk Board schemes</p> <p>Providing associated facilities to mulberry farmers such as reimbursement of cost of saplings, On-farm training and supply of start up tools, Assistance for construction of rearing shed, purchase of rearing equipment, construction of chawkie rearing shed and chawkie rearing equipment etc.,</p> <p>Implementation of Eri project on pilot basis since 2003-04 enabling caster and Tapioca farmers to get additional income.</p>
2.	Sericulture Development Fund	Sanction of funds to the beneficiary oriented schemes for which the funds are inadequate under plan, Catalytic development programme etc.
3	Non-Plan	Staff cost and contingencies

ORGANISATION OF THE DEPARTMENT

A) Commissioner of Sericulture:

At the Commissionerate level, an IAS officer, is the Head of the department assisted by (1) Additional Director (1) Joint Director (Monitoring), (2) Asst. Directors (Non - Technical), (3) Asst. Director (tech), (12) Sericulture Officers besides Non-Gazetted staff.

At the region level (4) officers in the cadre of Joint Directors have been functioning with Head Quarters at Anantapur / Chittoor / Warangal / Visakapatnam with necessary supporting staff.

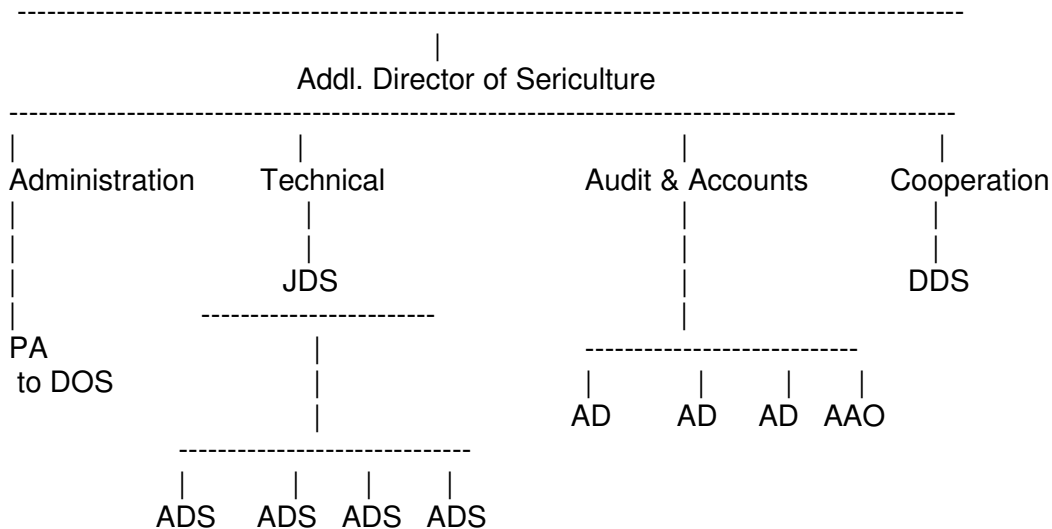
At the District level Dy. Director of Sericulture, Asst. Directors of Sericulture are functioning with jurisdiction over one or two districts or divisions. At present (8) Deputy. Directors of Sericulture, 43 Asst. Directors of Sericulture, 173 Inspector of Sericulture are working in Sericulture Department with necessary supporting staff.

NON-GAZETTED:

The following are the details of Non-gazetted staff:

235 Asst. Sericulture officers, 620 Technical Officers, 16 Sericulture Demonstrators, 836 Technical Assistants, 24 Superintendents, 6 Accountants, 1 Spl. Category Steno, 71 Sr. Assts., 5 UD Stenos, 5 LD Stenos, 86 Jr. Assistants, 60 LD-cum-Typist / Typist / Wireman, 3 Record Assistants, 51 Drivers, 4 Boiler Mechanics, 221 Attender / Attender-cum-watchman / Sweeper / Watchman / Watch & word, 1 Roneo Operator, 1 Jammadar, 4 Electricians, 1 Telephone Operator.

COMMISSIONER OF SERICULTURE

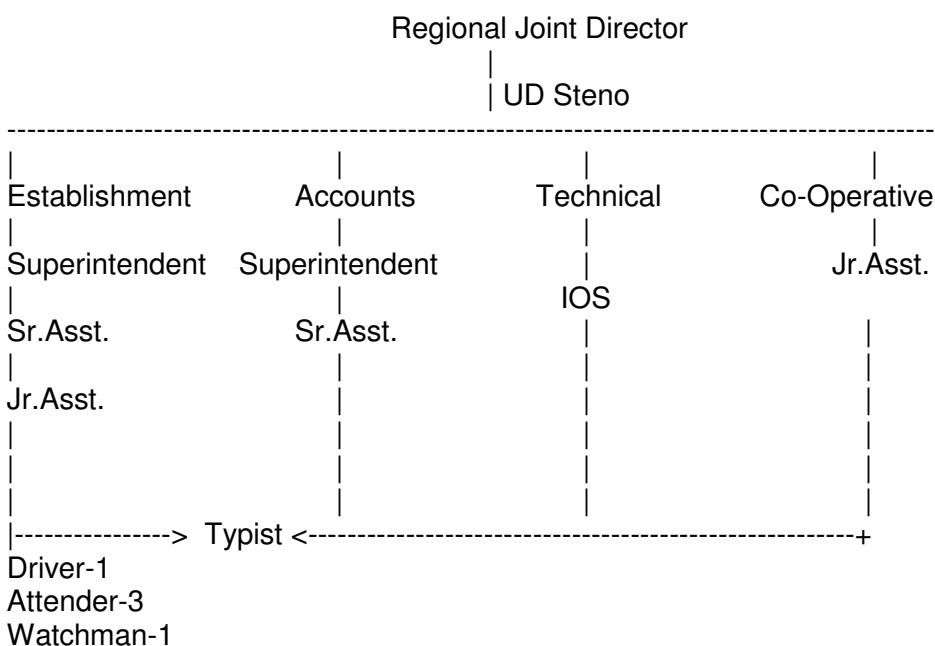


B) Regional Set-up :

The next in hierarchy is the regional set-up with 4 Regional Joint Directors of Sericulture located at the following places.

- 1) .Anantapur
(Anantapur, Kurnool, Prakasam and Guntur)
- 2).Chittoor
(Chittoor, Cuddapah and Nellore)
- 3).Visakhapatnam
(Srikakulam, Vizianagaram, Visakhapatnam, East Godavari, West Godavari and Krishna)
- 4).Warangal
(Adilabad, Nizambad, Karimnagar, Warangal, Khammam, Medak, Nalgonda, Mahaboobnagar, Hyderabad & Ranga Reddy).

The organisational chart of RJD's office is indicated below



The staff position of the Regional set-up is given below :

REGIONAL JOINT DIRECTOR(S) OFFICES (4)

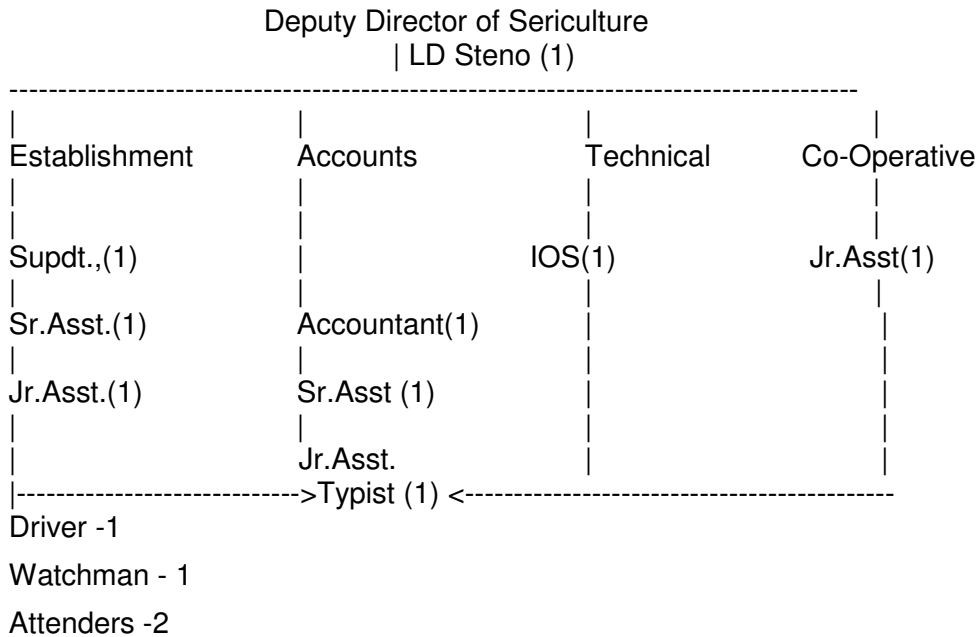
CADRE	STAFF
RJD	1
SUPDT./ACCT.	3
SR.ASST	2
JR.ASST	2
TYPIST	1
UD.STENO	1
DRIVER	1
ATTENDER	2
IOS	1
TOTAL:	14

C) Sericulture Zone / District Level:

The next in the hierarchy is the Dy. Director in the Districts. There are 8 Dy. Directors in the state. Their locations are as follows:

- 1).Dy. Director of Sericulture, Anantapur
- 2).Dy. Director of Sericulture, Chittoor
- 3).Dy. Director of Sericulture, Kurnool
- 4).Dy. Director of Sericulture, West Godavari
- 5).Dy. Director of Sericulture, Visakhapatnam
- 6).Dy. Director of Sericulture, Warangal
- 7).Dy. Director of Sericulture, Karimnagar
- 8).Dy. Director of Sericulture, Hyderabad

The organisational chart of the Dy. Directors office is given below:

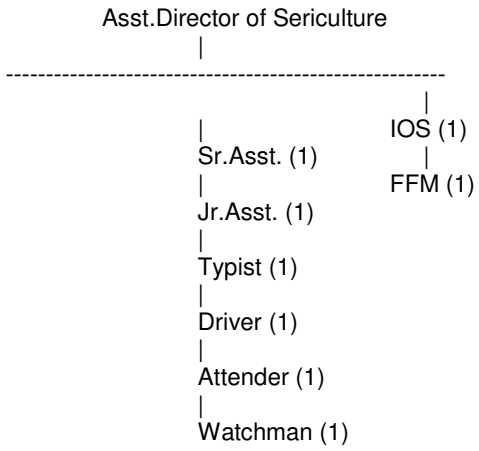


D) Sericulture Divisional Level:

There are 51 Asst. Directors in the Department. The districts of Rayalaseema which are the traditional sericultural districts have more than one Asst. Director in each district. Historically an Asst. Director who is heading solely one district is called district head and an Asst. Director who is heading a part of district is called Divisional head. The following are the locations of the Asst. Directors.

- 1) Anantapur - 9
(Anantapur, Hindupur, Madakasira (Regular & FR), Kadiri, Penukonda, Dharmavaram, Gorantla)
- 2) Kurnool - 3
(Adoni, Atmakur, Nandyal)
- 3) Chittoor - 9
(Chittoor, Madanapalli (RTI & Regular), Punganur (LR & FR), Tirupati, Palamaner, Kuppam, Horsley Hills)
- 4) Cuddapah - 2
(Rayachoti & Cuddapah)
- 5) Guntur - 1
- 6) Prakasam - 2
(Ongole & Markapur)
- 7) Nellore - 1
- 8) Srikakulam (Seethampeta) - 1
- 9) Vizianagaram - 2
(Regular & MFTU)
- 10) Visakhapatnam (Paderu) - 1
- 11) East Godavari (Kakinada) - 1
- 12) West Godavari (K.R.Puram) - 1
- 13) Krishna (Vijayawada) - 1
- 14) Adilabad - 2
(Utnoor & Chennoor)
- 15) Khammam (Badrachalam)- 1
- 16) Warangal (Etunagaram)- 1
- 17) Karimnagar - 3
(Elkathurthy, Karimnagar (Regular & MFTU))
- 18) Nizambad - 1
- 19) Medak - 1
- 20) Nalgonda - 1
- 21) Ranga Reddy (Vikarabad) - 1
- 22) Mahaboobnagar (Shadnagar) - 1
- 23) Hyderabad - 1

The organisational chart of an AD office is indicated below:



The staff position of the Dy. Directors of Sericulture

SL NO	CADRE	STAFF
1	DD	1
2	SUPDT./ACCT.	1
3	SR.ASST	2
4	JR.ASST	3
5	TYPIST	1
6	L.D.STENO	1
7	DRIVER	1
8	ATTENDER	3
9	WATCHMAN	1
10	IOS	1
11	CSR	1
12	Sweeper	2
	Total :	18

Asst Director of Sericulture :-

There are (51) Asst. Directors in the department including (3) ADS working in the Head office. The Details of Staff working under the Asst. Director of Sericulture in different Sericulture Divisions / Districts are given below :

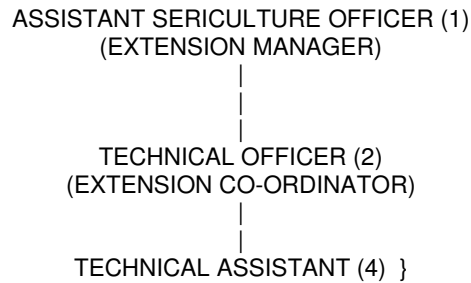
SL NO	CADRE	STAFF
1	AD	1
2	SUPDT./ACCT.	1
3	SR.ASST	1
4	JR.ASST	1
5	TYPIST	1
6	DRIVER	1
7	ATTENDER	1
8	WATCHMAN	1
9	IOS	1
10	CSR	1
11	AIS	1
12	FFM	1
	TOTAL	12

The technical infrastructure details are furnished here under .

Sl. No.	Name of the unit	No. of units
1	On Farm Technical Service Centres (TSC-On farm)	140
2	Seed farms	95
3	Seed area TSCs	11
4	Seed cocoon markets	5
5	Grainages	29
6	Govt. Cocoon Markets	8
7	Reeling Units	54
8	Non-farm TSCs	14
9	Training Centres / Units.	8
10	Tasar seed stations	14
	Total	400

1. Technical Service Centres (On-farm):

The main function of a TSC is to consciously bring about an increase in mulberry area and the production per unit area besides improving the quality. The other functions of the TSC are liasoning with different Government agencies for implementing different programmes and data collection for effective management of information system. Extension service unit is being viewed as a change agency. It intervenes in an existing situation to promote some desirable changes. For doing so it demands an organisational structure. TSC is an organisational extension unit and its composition is given below:



TSCs usually have a definite jurisdiction in terms of area, villages and number of farmers. Generally, this jurisdiction is more compact in the traditional areas large in the new areas. The responsibility for field work is shared by the field extension staff with each member having a known area to serve.

Each TSC has a plan of action to implement (or) a target to achieve, in terms of Mulberry crop area and no.of Sericulturists. The field staff work according to an established pattern, making weekly, fortnightly (or) monthly visits to villages. They also receive farmers who come for advice in the TSC office. While covering new areas the field staff identify clusters of villages and have a regular pattern of visits, using a route map.

The extension activities conducted by the TSC staff usually include group meetings, study tours, and field days. In some cases, exhibitions and extension literature are used to build-up the awareness and interest of the farmers in sericulture.

There are 162 TSCs in the state for about 1.00 lakh acres. The district wise no .of TSCs in each Dist. is given below.

TECHNICAL SERVICE CENTRES LIST

Sl. No.	District	Location of the TSC
1	ANANTAPUR	1 Battulapally
		2 C.K.Pally
		3 Kothacheruvu
		4 Bukkapatnam
		5 Penugonda
		6 Somandepalli
		7 Roddam
		8 Madakasira
		9 Amarapuram
		10 Rolla
		11 Kalyandurg
		12 Kambadur
		13 Hindupur
		14 Parigi
		15 Chilmathur
		16 Gorantla
		17 Lepakshi
		18 Kadiri

		19	OD.cheruvu
		20	Nallamada
		21	Talupula
		22	Ananthapur(D)
		23	Ananthapur
2	KURNOOL	24	Atmakur
		25	Pamulapadu
		26	M.Lingapuram
		27	Nandyal
		28	Nandikotkur
		29	Adoni
		30	Pattikonda
3	PRAKASHAM	31	Tallur
		32	Cheemakurthi
		33	Giddalur
		34	Dornala
		35	Dornala
4	GUNTUR	36	Santhepalle
		37	Tenali
5	CHITTOOR	38	Chittoor
		39	Bangarupalem
		40	Putalapattu
		41	Piler
		42	Palamaner
		43	Bireddypalli
		44	Gangavaram
		45	Punganur
		46	Battamdoddi
		47	Ramasamudram
		48	Chowdepalli
		49	Madanapalli
		50	Kambalapalle
		51	Vayalpadu
		52	B.Kothakota
		53	Chandagiri
		54	Vedurukuppam
6	CUDDAPAH	55	Cuddapah
		56	Pulivendala
		57	Rayachoty
		58	L.R.Palle
7	NELLORE	59	Marripadu
		60	Udayagiri
		61	Kanigiri

8	WARANGAL	62	Hanumakonda
		63	Parkala
		64	Jangaon
		65	Maddur
		66	Cheriyal
		67	Eturnagaram
		68	Salvai
		69	Kothaguda
9	ADILABAD	70	Utnoor
		71	Kaddam
		72	Manchiryal
10	KARIMNAGAR	73	Sirisilla
		74	Jagityal
		75	Karimnagar
		76	Husnabad
		77	Kataram
		78	Elakathurty
		79	Huzurabad
		80	Jammikunta
11	KHAMMAM	81	Aswaraopet
		82	Bhadrachalam
		83	Cherla
		84	Khammam
		85	Madhira
		86	Venkatapuram
		87	Wyra
		88	Yerragunta
		89	Sarvella
12	MEDAK	90	Siddipet
		91	Dubbaka
		92	Sangareddy
		93	Gajwel
		94	Medak
13	NIZAMABAD	95	Kamareddy
		96	Nizamabad
14	NALGONDA	97	Bhongiri
		98	Miriyalaguda
		99	Devarakonda
		100	Nalgonda
15	RANGAREDDY	101	Vikarabad
		102	Parigi
		103	Chevella
		104	Ibrahimpatan
16	M.NAGAR	105	Gadwal
		106	Kosigi
		107	Mahabubnagar
		108	Kalwakurthy
		109	Shadnagar

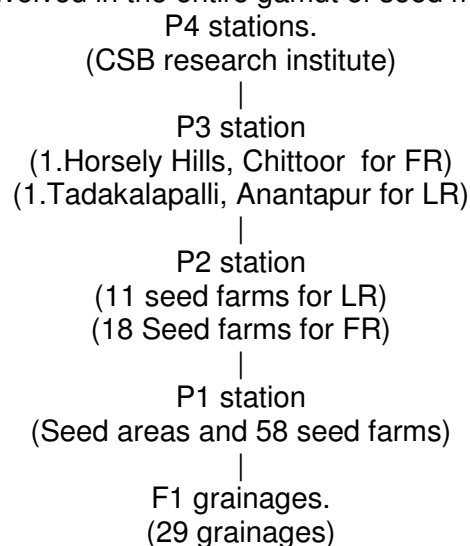
		110	Nagarkurnool
		111	Kothakota
17	KRISHNA	112	Niziveedu
		113	Nandigam
		114	Vijayawada
18	W.GODAVARI	115	Vegivada
		116	K.Kota
		117	Jeelugumilla
19	E.GODAVARI	118	Chebrolu
		119	Ravulapalem
		120	Rampachowdavaram
20	VIZAG	121	Hukumpet
		122	Chintapalli
		123	Anakapalli
		124	Nakkapalli
		125	Anandapuram
		126	Narsipatnam
		127	Paderu
		128	Dumbriguda
		129	Arakuvalley
		130	G.Madugula
21	V.NAGARAM	131	Bobbili
		132	Cheepuripalli
22	SRIKAKULAM	133	Srikakulam
		134	Kotabommali
		135	Ranasthalam
		136	Patapatnam
		137	Mandasa
		138	Palokonda
		139	Seetampeta
		140	Rajam

2.Seed farms:

Seed management is the back bone of Sericulture industry in the sense that the basic requirement and performance of cross breed disease free layings of the commercial cocoon growers is governed by effective seed management. Effective seed management demands maintenance and multiplication of parental seed materials i.e., both LR & FR parental eggs or cocoons at various levels on scientific lines.

In India a three level system of seed management is in operation which has been proved to be very effective in retaining the original genotype and phenotypic characters in the silkworm races (both LR & FR) though the races are subjected to repeated inbreeding.

The following levels are involved in the entire gamut of seed multiplication programme.



In the above chain, the letter P denotes parental level. P4 represents great, great grand parent, P3 great grand parent and so on.

a. P3 Seed stations:

In Andhra Pradesh there are (2) P3 seed farms established one each at Tadakalapalli of Anantapur for Multivoltines (LR) and at Horsley Hills of Chittoor District for Bivoltine (FR). In P3 Seed farms P3 rearings are conducted with P4 layings obtained from research institute. These layings are obtained as a rejuvenation stock at an interval of one year. A Portion of the basic layings are utilised for further maintenance at this level and balance layings are utilised for preparation of P2 layings for supply to P2 farms in various places. Thus the P3 farms act as not only basic seed maintenance farms but also act as seed multiplication farms.

The staff pattern of p3 stations (LR and FR) as indicated in the following table.

CATEGORY	STAFF Of P3 stations
ADS *	2
IOS	4
AIS	4
FFM	4
OPS	6
WAT	2
TOTAL	20

b. P2 SEED FARMS :

P2 layings produced by P3 stations are reared in 29 P2 seed farms in the state to obtain P2 seed cocoons. P2 is an intermediary level of breeding. This is required to retain the original characters besides multiplication. P2 cocoons produced will be utilised after due assessment for preparation of P1 layings.

The staff of P2 station (LR and FR) is indicated in the following table.

CATEGORY	STAFF Of P2 station
IOS	1
AIS	1
FFM	2
OPS	4
WAT	1
TOTAL	9

C. P1 Seed Farms:

P1 seed layings received from P2 stations are reared on mass scale at this level to meet relatively increased requirement of seed cocoons in CB grainages. In non-traditional Coastal and Telangana districts the seed cocoons are procured from these seed stations for utilisation in cross breed grainages because the seed areas are not well established.

The staff pattern of P1 station (LR and FR) as indicated in the following table.

CATEGORY	STAFF Of P1 station
SO	1
ASO	1
TAs	1
TOTAL	3

3. Seed Area TSC :

In traditional Districts of Ananthapur and Chittoor the Department of Sericulture has identified and notified separate Seed areas both for local and foreign race with Sericulture farmers who have good conditions for rearing Silkworms. They are entrusted to rear the parental Silkworms. These farmers are called Seed growers. Kurnool and Cuddapah districts also have their separate Seed areas.

The following are the identified seed areas in each district for rearing of P1 layings to produce seed cocoons required in the Grainages.

Sl. No.	Name of the region & district	Name of the LR Seed Area	Name of the Seed TSC attached	Name of the FR Seed Area	Name of the Seed TSC attached	Remarks
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I. Rayalaseema Region

1.	Anantapur	Gorantla	Gorantla	Madakasira	Madakasira
2.	Chittoor	Kolamasinapalli	Kundurpi	Punganur	Amarapuram
3.	Cuddapah	Rayachoti	Kolamasinapalli		Punganur
			Punganur		Palamaner
			Rayachoti		-> 1 TSC for both
4.	Kurnool	Adoni	Adoni	Peapully	LR & FR

II. Coastal Region

5.	Krishna	Pothipadu			
6.	Visakhapatnam			Paderu	

III. Telangana Region:

1.	Mahaboobnagar	Shadnagar			
2.	Medak	Siddipet			
3.	R.R. District			Vikarabad	Vikarabad (Parigi)

Note: In non-traditional districts, seed farms are also producing seed cocoons in addition to selected seed areas.

In order to ensure quality P1 seed supply to the CB Grainages, 11 seed TSCs in traditional districts of Anantapur, Chittoor, Kurnool and Cuddapah are functioning. The composition of each TSC(seed) is (1) AIS,(2) FFM, (2) Operatives.

4. Seed Cocoon Market:

In every seed area there is seed cocoon market. The market staff has to perform the duties as per the instruction of Asst. Director, Seed Area from time to time. The main functions of seed cocoon market is collection of indents from the grainages for LR & FR cocoons, testing of lots for pebrine and other disease. Distribution of cocoons to grainages duly fixing the rate as per the guidelines of seed committee, organising the marketing facility for the diseased or rejected cocoons and issuing of receipts to grainage Inspectors as well as to the farmers. There are 5 seed cocoon markets in traditional districts at the following places:

Sl.No.	District	LR/FR	Market Place
1	Anantapur	LR	Gorantla
2	Anantapur	FR	Madakasira
3	Chittoor	LR	Punganur
4	Chittoor	FR	Punganur
5	Kurnool	LR/FR	Adoni

The L.R. and F.R. seed cocoons produced by seed farmers in traditional districts are to be brought invariably to seed cocoon markets as the CB grainages in those districts are not permitted to buy the seed cocoons directly. The samples of seed cocoon lots arrived are subjected for physical and scientific tests required to assess the fitness of the cocoons for use in CB dfls production. After assessment, the incharge of the market calculates and fixes the rate of seed cocoons duly following the procedure laid down by the seed committee and the rate of seed cocoons per standard number communicated from time to time.

Staff particulars of seed cocoon market :

CATEGORY	STAFF Of seed cocoon market
IOS	1
AIS	1
FFM	2
OPS	2
WAT	1
TOTAL	7

5. GRAINAGES:

Grainages are the centres where silkworm eggs are produced by crossing local race females with FR males emerged out of cocoons obtained from Seed areas/Seed farms. There are 29 grainages to produce cross breed layings.

The staff are engaged in activities such as cocoon selection, preservation, moth picking, pairing & isolation, moth examination, disinfection, washing cleaning the premises etc. At CB grainage level a systematic programme has been chalked out and is being implemented from 1995-96 onwards. Since then the endeavour has been to run the units more on commercial lines to recover entire expenditure involved in grainages including depreciation on buildings and equipment based on break even analysis duly taking into cognisance the fixed and variable costs. Optimum working capital requirements are calculated and allotted to each Grainage.

Regularly, at the beginning of the financial year, unit incharges and the Asst. Directors would prepare production plans based on the local demand of CB dfls and capacity utilisation of the unit. The plans are being prepared and got approved by the Director for implementation at field levels. The A.P., seed committee reviews performance of the seed farms / Grainages regularly. As an economic measure in grainage, a new system "Sex separation of FR seed cocoons was introduced to separate female cocoons which are not useful for crossing on scientific lines and dispose them in cocoon market for reeling before emergence.

The locations of the Grainages in different districts.

Sl. No	District	Location
1	Anantapur	1.Penukonda
		2.Dharmavaram
		3.Anantapur
		4.Madakasira
		5.Hindupur
		6.Kadiri
2	Kurnool	7.Atmakur
		8.Nandyal
3	Prakasam	9.Markapur
		10.Giddalur
4	Chittoor	11.Palamaner
		12.Madanapalle
		13.Punganoor
		14.B.Kothakota
		15.Kuppam
		16.Chittoor
		17.Chandragiri
5	Cuddapah	18.Rayachoti
		19.L.R.Palli
6	Nellore	20.Atmakur
7	Krishna	21.Gannavaram
8	E.Godavari	22.R.C.Varam
9	W.Godavari	23.Vijayarai
10	Vizianagaram	24.Venugopalapuram
11	M.Nagar	25.Shadnagar
12	Karimnagar	26.Elkathurthy
13	Khammam	27.Wira
14	Medak	28.Siddipet
15	Adilabad	29.Utnoor

staff pattern of Grainage as indicated in the following table.

Cadre	Staff Of Grainage (C B)
IOS	1
AIS	1
FFM	3
OPS	7
JA	1
ATT	1
WAT	1
ELCN	1
MEC	1
TOTAL	19

6. Cocoon Markets:

Cocoon markets are the places where the sellers (cocoon producers) and buyers (reelers) transact the cocoons as per the rules issued under A.P. Silkworm Seed & Cocoon (Control) Rules, 1983. No farmer or reeler shall sell or buy the cocoons except in a Govt. Cocoon Market which is notified by Govt. of A.P. Inspector of Sericulture is Market Officer and in-charge of the Govt. Cocoon market. The performance of a Govt. Cocoon market is measured in terms of quantity of cocoons and number of lots arrived to the market. Since cocoon production is seasonal the work load in the Govt. Cocoon market also varies from season to season.

In the Govt. Cocoon Markets, the cocoons are arranged in lots. A bidding slip containing the crop details of the farmer is displayed on the lot for the benefit of the reelers. Cocoon lots are auctioned by the Govt. staff of the Market and the highest bidder will be offered the lots. Reelers have to deposit the money in advance with the market staff. Bills of reeler and farmer are prepared separately and amounts paid to the farmers on the spot on the same day. 1% market fee is collected from each of the farmer and reeler and remitted to Govt. on the next day. There are other facilities such as auditorium, audio visual aids to achieve better transfer of technology. Amenities like rest rooms for ladies and gents are also provided in the markets. Atleast 10% of the cocoon lots in each market are tested and the quality parameters of the cocoons are displayed on a report paper for the benefit of the cocoon producer and buyer so as to bring quality consciousness. Disease testing and monitoring is also being undertaken at the market level and they are transmitted to the field for suitable corrective actions.

There are 8 markets functioning in the state. The locations of the cocoon markets are shown hereunder.

- 1.Hindupur
- 2.Madanapalli
- 3.Dharmavaram
- 4.Kadiri
- 5.Hyderabad
- 6.Palamaneru
- 7.Rayachoti
- 8.Hanuman Junction

Cadre	Staff of cocoon market
IOS	2
AIS	2
FFM	6
OPS	6
WAT	1
TOTAL	17

7. Reeling Units:

There were 54 reeling units run by Department of Sericulture and as on today most of them have been closed. Only 19 units are being run with limited capacity.

Govt. have issued a Memo. on 16.10.96 wherein under the Chairmanship of the District Collector and other members, Govt. have agreed to out right sale / lease out the Govt. Reeling Units to private parties after an auction. Accordingly, a paper notification was issued calling for prospective buyers / leasees. So far we have had some response in Kurnool for the Nandikotkur reeling unit and in Chittoor B.Kothakota unit. Further action has to be expedited. It is, therefore, proposed to actively follow up on this GO and to ensure that most of the Govt. Reeling Units are leased out or sold to private parties. It is also being examined as to whether a co-operative silk farmer/weaver/reeler could be found who could be asked to take over the management of the silk with all necessary assistance being provided to them including working capital from financial institutions. The endeavour is, privatisation of the reeling units to minimise the role of Govt. to the extent possible.

8. Non-Farm Technical Service Centres (NFTSCs):

Non-Farm activity viz, Silk Reeling, Twisting are Industrial in nature. It involves huge investment cost viz., high cost of Machinery, huge working capital etc. Further lot of technical skill is required for both reelers / twisters and also to the entrepreneurs, in the process of un-winding raw silk thread from cocoons by using sophisticated reeling machinery and then to twist the raw silk on twisting machinery.

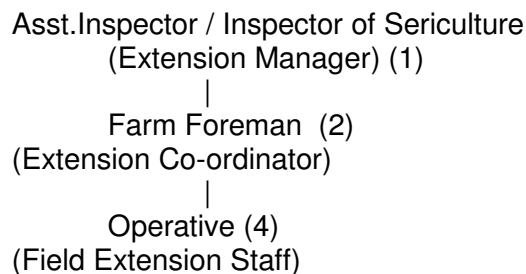
The On-Farm Sector of Sericulture has been developed well by dovetailing schemes like IRDP, DPAP etc., but the Non-Farm Sector could not pick up on par with On-Farm due to various problems, with the result 60% of the reeling cocoons produced in the state are being marketed in Karnataka.

Under the above circumstances, the Department has given priority for the development of Non-Farm Sector in the State and identified the following (14) potential pockets where Non-Farm Technical Service Centres were established in April, 1994.

Sl.No.	District	Location of NFTSC
1.	Anantapur	1. Hindupur
		2. Dharmavaram
		3. Kadiri
2.	Chittoor	4. Madanapally
		5. Palamaner
		6. Kuppam
3.	Cuddapah	7. Proddutur
		8. Rayachoty
4.	Kurnool	9. Atmakur
5.	Hyderabad	10. Hyderabad
6.	Nalgonda	11. Nalgonda
7.	Karimnagar	12. Karimnagar
8.	Krishna	13. Hanuman Junction
9.	East Godavari	14. Peddapuram

The main function of the NFTSC is to develop the post cocoon sector by identifying and organising entrepreneur development programme for reelers, twisters and weavers. As a follow up the training programmes, there has to be effective liaison with financial institutions to tap as much finance as possible for establishing independent reeling units. This has been a fairly new concept and taken-up during the world bank project. NFTSCs have come into existence since 1994. Productivity clubs have also been constituted which include members from reelers, twisters and weavers, in order to identify any problems which can be solved at their level. The reeling capacity in non-traditional districts is very limited compared to the traditional districts. Non-farm TSCs have also been started consciously in non-traditional districts in order to fill the gap.

The organisational structure of NFTSCs is shown hereunder



9. Training Centres / Units

a. Regional Training Centres (RTCs)

There are 3 Regional Training Centres established one each at Hindupur (Anantapur Dist.), Shadnagar (Mahaboobnagar Dist.), Bakkannapalem (Near Vizag). The objective of these centres is to impart technical training to field staff starting from Farm Foreman to down the line upto Operative by organising various Training courses to upgrade the skills and knowledge of the staff. Under National Sericulture Project necessary trainings and teaching materials have been made available in Regional Training Centres. Hostel facilities, libraries, laboratories are set up. The curriculum and syllabus was developed with the help of a consultant who was retired Joint Director from Central Silk Board. The staff of the training institutions are being sent to CSR&TI, Mysore and other Training Institutions of Central Silk Board to expose them the latest technologies who in turn would act as trainers to impart training at these Institutions. These centres are regional in nature.

b. MOBILE FARMERS UNITS:

Four MFTUs are there in the state located one each at Anantapur, Chittoor, Karimnagar and Vizianagaram. These units are attached with a vehicle, video projector and other audio visual equipment. The objective of these centres is to organise farmers meets in villages during the day time and in the evening conduct film shows on sericulture industry and improved technologies involved. The recommended package of practices like High Yielding Variety of mulberry, disinfection with lime and bleaching powder, wider spacing, shoot and shelf rearing systems, pot incubation etc., are explained during the farmers' meet. Much emphasis is also laid for the popularisation of green organic manuring, profuse usage of Farm Yard Manure, Vermi compost, Bio-fertilizers, Mulching, Drip Irrigation etc., In the evening, Video films are shown on latest technologies which have been developed by not only the Department but also by Central Silk Board. Effective transfer of technology can be achieved through these programmes besides motivating new farmers to get into Sericulture fold.

Location of the RTC	Location of the MFTU
Hindupur of Anantapur	Anantapur
Shadnagar of M'nagar	Karimnagar
Bakkannapalem of Vizag	Vishakhapatnam

The details of the staff working in the training institutions are indicated below

Cadre	Staff of RTC	MFTU
ADS	0	1
IOS	1	0
AIS	1	1
FFM	3	4
OPS	3	4
WAT	1	1
DRI	1	1
TOTAL	11	12

C. Reeler's Training Institute (RTI), Madanapally:

This was sanctioned during the world bank project as a separate RTI basically for imparting training in post cocoon sector to upgrade the skills of the entrepreneurs (both managerial and technical) and the workers of entrepreneurs. This is located at Valasapally near Madanapally at Chittoor district. It is proposed to merge MFTU functioning at Chittoor with RTI, Madanapally to effectively implement the activities assigned along with supporting staff.

The staff sanctioned to RTI are as follows:

Cadre	Staff of RTI
ADS	1
IOS	2
AIS	1
FFM	4
OPS	4
WAT	1
MEC	1
SK	1
TOTAL	15

The Asst. Director looks after this institute assisted by IOS, AIS, Farm Foremen and Operatives. The objective of this institute is to meet the training needs of private entrepreneurs, their workers and any other functionary related to reeling, twisting and weaving. This institute is not only imparting technical skills in reeling and other allied activities but also developing entrepreneur among owners of units of post cocoon activities. Necessary trainings are being conducted in order to develop work force for post - Cocoons operations in the state.

10. Tasar Seed Stations /Pilot Project Centres (PPC's):

Andhra Pradesh has the privilege of producing another type of silk called Tasar silk apart from mulberry, which is locally called as dasali pattu. The tasar silkworm feeds on the leaves of Terminalia sp. which are available in the forest. Tasar is produced mainly by the tribals who take the layings and rear them on the trees of Terminalia plantation. The tasar silkworms spin cocoons on the trees. These cocoons are collected by the tribals and are sold. Tasar is concentrated mainly in the districts of Telangana i.e., Adilabad, Karimnagar, Warangal and Khammam and in few pockets of north coastal region of East. Godavari and Visakhapatnam. Tasar crop is raised thrice in a year. First and Second crops are seed crops where as third crop is a commercial crop. The details are furnished below:

<u>Crop</u>	<u>Period</u>
I Crop	July - August
II Crop	Sept - October
III Crop	Nov - January

The Departmental and Central Silk Board Grainages will supply the seed to tasar rearers. Forest areas having host plants are allotted to tribal for conducting rearings of silk worms. The first crop will commence in July and is harvested by end of August. On an average each seed rearer is provided with 200 tasar seed layings of Bivoltine or Trivoltine during the first crop. These cocoons are used for preparation of layings for conducting 2nd crop. The yield per laying during the first crop is 10 cocoons and the rearer realises an average income of Rs.2000/-.

Second crop will be conducted as seed rearing during the month of September & October. Each rearer is provided with 250 tasar seed layings (Bivoltine, Trivoltine) and the yield ranges from 15 to 20 cocoons per one laying. Average income ranges from Rs.2000/- to 2500. These cocoons are utilised for preparation of commercial layings in 3rd crop.

Third crop will be conducted as commercial rearing during the months of November - January. Each rearer is provided with 300 no.of tasar layings and the harvest per one laying is 30 cocoons and the average income is around 4500 to 5000/-.

There are 14 PPCs in the state for 3000 Tasar tribal rearers. The PPCs will produce / procure required Tasar seed and supply to the rearers and render technical guidance to them in conducting Tasar silk worm rearing and cocoon production. The PPCs also conduct market transactions. The normal composition of staff of the PPC is (1) IOS, (2) AIS, (4) FFM, (3) Ops.

The details of no. of rearers district-wise existing and proposed pattern of staff for PPC's are given below:

Sl No	District	Location	No.of Tasar Rearers
1	Adilabad	1.Chinnoor	598
		2.Gollatarividi }	395
		3.Salaguda }	
		4.Utnoor }	320
		5.Chincholi }	
2	Karimnagar	6.Mahadevpur	523
3	Khammam	7.Venkatapuram	348
4.	Warangal	8.Venkatapur	391
		9.Jakaram }	286
		10.E.Nagaram }	
5.	E.Godavari	11.Rampachodavaram	105
6.	M.Nagar	12.Kosigi	20
7.	Prakasam	13.Prakasam	10
8.	Vizag	14.Chintapalli	4
Total : 3000			

ROLE OF EACH CATEGORY OF FUNCTIONARY IN THE DEPARTMENT:

1) Technical Service Centres (On-Farm):

a) Asst. Inspector of Sericulture (TSC-Incharge):

- As Technical Service Centre (TSC) In-charge, should supervise the work of Operatives and Farm Foreman and report facts to higher authorities.
- Should maintain all registers and records of the TSC with necessary farmers data.
- Should maintain attendance and movement register regularly.
- Should enter the data in computers and submit the reports through floppies.
- Should maintain the decorum and discipline.
- Should review the tour diaries of his / her field staff.
- Should conduct motivation camps, workshops, demonstrations, exhibitions etc.
- Should attend credit camps to facilitate the credit from the financial institutions.

b) Farm Foreman:

- Should achieve the targets fixed under mulberry expansion, cbdfls brushing and production of cocoons besides assisting the sericulturists in marketing.
- Should ensure perfect disinfection, transfer of technology and implementation of the scheme.
- Should supply cbdfls obtained from Government Grainages to the Sericulturists and monitor the diseases and take corrective steps.
- Should collect the technical data and maintain the tour dairies.
- Should give the feed back on crops to higher officers making necessary field visits.
- Should collect soil samples and maintain the necessary soil test records.
- Should attend credit crops to identify the beneficiaries.
- Should maintain grievance register and take follow-up in consultation with higher officers.

c) Operative:

- Should achieve the targets fixed under mulberry expansion, cbdfls brushing and production of cocoons besides assisting the sericulturists in marketing.
- Should ensure perfect disinfection, transfer of technology and implementation of the scheme.
- Should supply cbdfls obtained from Government Grainages to the Sericulturists and monitor the diseases and take corrective steps.
- Should collect the technical data and maintain the tour dairies.
- Shall assist his Asst Director in seizure of unauthorised manufacture / sale transport the Silk worm seed as per the procedure laid down A.P. Silk worm seed and Cocoon control Act 1956 and Rules 1983.
- Shall assist his Asst Director in seizure of seize the unauthorised manufacture / sale transport the Silk worm seed as per the procedure laid down A.P. Silk worm seed and Cocoon control Act 1956 and Rules 1983.
- Shall ensure the disposal of cocoons in regularised cocoon markets laid down A.P. Silk worm seed and Cocoon control Act 1956 and Rules 1983.
- Shall initiate processing of application for issue of licence under the laid down A.P. Silk worm seed and Cocoon control Act 1956 and Rules 1983.
- Shall initiate processing of application for renewal of license under the Rules laid down A.P. Silk worm seed and Cocoon control Act 1956 and Rules 1983.

2) **Seed Technical Service Centres:**

a) Asst. Inspector of Sericulture / Inspector of Sericulture:

- As Seed Technical Service Centre In-charge, should supervise the work of Operatives and Farm Foreman and report facts to higher authorities.
- Should maintain all registers and records of the TSC with necessary farmers data.
- Should maintain attendance, movement registers and tour diaries regularly.
- Should enter the data in computers and submit the reports through floppies.
- Should maintain the decorum and discipline.
- Should review the tour diaries of his / her field staff.
- Should conduct motivation camps, workshops, demonstrations, exhibitions etc.
- Should attend credit camps to facilitate the credit from the financial institutions.
- Shall seize the unauthorised manufacture / sale transport the Silk worm seed as per the procedure laid down A.P. Silk worm seed and Cocoon control Act 1956 and Rules 1983.
- Shall seize the unauthorised manufacture / sale transport the Silk worm seed as per the procedure laid down A.P. Silk worm seed and Cocoon control Act 1956 and Rules 1983.
- Shall ensure the disposal of cocoons in regularised cocoon markets laid down A.P. Silk worm seed and Cocoon control Act 1956 and Rules 1983.
- Shall initiate processing of application for issue of licence under the laid down A.P. Silk worm seed and Cocoon control Act 1956 and Rules 1983.
- Shall initiate processing of application for renewal of license under the Rules laid down A.P. Silk worm seed and Cocoon control Act 1956 and Rules 1983.

b) Farm Foreman:

- Should achieve the targets fixed under production of quality seed cocoons.
- Should ensure perfect disinfection, transfer of technology and implementation of the scheme.
- Should supply cbdfls obtained from Government Grainages to the Sericulturists and monitor the diseases and take corrective steps.
- Should inspect silkworm rearings and collect sample larvae for testing.
- Should guide the farmers in proper mounting of worms, harvesting transportation of seed cocoons.
- Should collect the technical data and maintain the tour dairies.
- Should give the feed back on crops to higher officers making necessary field visits.

c) Operative:

- Should achieve the targets fixed under production of seed cocoons besides assisting the sericulturists in marketing.
- Should ensure perfect disinfection, transfer of technology and implementation of the scheme.
- Should supply cbdfis obtained from Government P1 Grainages to the Sericulturists and monitor the diseases and take corrective steps.
- Should guide the farmers in black boxing of eggs for better hatching.
- Should collect the technical data and maintain the tour dairies.

3) Seed Cocoon Markets:

a) Inspector of Sericulture:

- Should supervise all the activities of his subordinates.
- Should collect the indents for seed from grainages and distribute seed as per the plan.
- Should collect the cost of cocoons from grainages and remit into concerned account.
- Should maintain discipline and decorum of the office.
- Should maintain the attendance of the staff regularly.
- Shall seize the unauthorised manufacture / sale transport the Silk worm seed as per the procedure laid down A.P. Silk worm seed and Cocoon control Act 1956 and Rules 1983.
- Shall seize the unauthorised manufacture / sale transport the Silk worm seed as per the procedure laid down A.P. Silk worm seed and Cocoon control Act 1956 and Rules 1983.
- Shall ensure the disposal of cocoons in regularised cocoon markets laid down A.P. Silk worm seed and Cocoon control Act 1956 and Rules 1983.

b) Asst. Inspector of Sericulture

- Should supervise the activity of Operatives & Farm Foreman.
- Should assess the cocoons and fix the price for seed cocoons.
- Should maintain the records and accounts up-to-date.
- Should maintain the stocks and stores properly with up-to-date records.

c) Farm Foreman:

- Should supervise all the activities of the Operatives.
- Should conduct testing of pupae and maintain relevant record.
- Should weigh the cocoons after assessment.

d) Operative:

- Should sort out the Seed Cocoons and arrange for preservation of cocoon lots properly.
- Should assist in testing the pupae.
- Should maintain hygienic conditions in the cocoon markets duly collecting Uzi maggots and burning them from time to time.
- Should transport the seed cocoons properly to Govt. Grainages.

4) Grainages:

a) Inspector of Sericulture:

- Should supervise all the activities of his staff and report on merits / demerits to Higher Officers for necessary action.
- Should prepare production plan in advance to achieve the targets fully.
- Cold Store the eggs duly following the norms in slack periods.
- Should maintain discipline and decorum of the office.
- Should maintain the attendance of staff.
- Shall seize the unauthorised manufacture / sale transport the Silk worm seed as per the procedure laid down A.P. Silk worm seed and Cocoon control Act 1956 and Rules 1983.

b) Asst. Inspector of Sericulture

- Should look after disposals of layings and remittances besides supervising all the activities of his lower staff.
- Should maintain registers and records with up-to-date entries.

c) Farm Foreman:

- Should supervise the activities of the Operatives.
- Should attend the pupal testing and moth testing as per norms.
- Should maintain stocks and stores including proper preservation of pierced cocoons.
- Should maintain the hygienic and congenial conditions and record the temperature and relative humidity.

d) Operative:

- Should attend the disinfection of the grainage building and equipment.
- Should attend sorting of seed cocoons and arrange lots systematically.
- Should attend emergence, pairing, isolation of moths, egg laying and surface disinfection of eggs.
- Assist Farm Foreman in testing of Pupae and Moth.

5) **P1 Grainages:**

a) **Inspector of Sericulture:**

- Should supervise all the activities of his staff and report on merits / demerits to Higher Officers for necessary action.
- Should prepare production plan in advance to achieve the targets fully.
- Should maintain discipline and decorum of the office.
- Should maintain the attendance of staff.

b) **Asst. Inspector of Sericulture**

- Should look after disposals of layings and remittances besides supervising all the activities of his lower staff.
- Should maintain registers and records with up-to-date entries.

c) **Farm Foreman:**

- Should supervise the activities of the Operatives.
- Should attend the pupal testing and moth testing as per norms.
- Should maintain stocks and stores including proper preservation of pierced cocoons.
- Should maintain the hygienic and congenial conditions and record the temperature and relative humidity.

d) **Operative:**

- Should attend the disinfection of the grainage building and equipment.
- Should attend sorting of seed cocoons and arrange lots systematically.
- Should attend emergence, pairing, isolation of moths, egg laying and surface disinfection of eggs.
- Assist Farm Foreman in testing of Pupae and Moth.

6) **Seed Farms:**

a) **Asst. Inspector of Sericulture / Inspector of Sericulture:**

- Should prepare production plan to achieve the target and communicate schedule to subordinates in advance.
- Should supervise all the activities of the Operatives / Farm Foreman.
- Should maintain registers and records with up-to-date entries.
- Should maintain decorum and discipline of the office.

b) **Farm Foreman:**

- Should supervise the activities of the Operatives.
- Should attend the larval and pupal testing.
- Should maintain stocks and stores.
- Should maintain the hygienic and congenial conditions and record the temperature.
- Should maintain a separate chawkie plot and plan pruning schedule for systematic brushing of layings.

c) **Operative:**

- Should attend the gardening duly following the package of practices.
- Should attend the suitable leaf picking personally in emergency conditions.
- Should attend the disinfection of rearing house and equipment.
- Should attend incubation with black boxing for uniform hatching.
- Should take care of the worms till harvesting cocoons.

7) **Reeling Units:**

a). **Inspector of Sericulture:**

- Should supervise all the activities of the Operatives / Farm Foreman & AIS to ensure production of quality silk as per targets.
- Should see that discipline is maintained in the Unit.
- Should personally attend the purchase of cocoons and sale of silk yarn / bye-products as per the procedure and norms.
- Should maintain up-to-date records and remit realisations as and when they are received without making any delay.
- Should maintain proper attendance of staff.

b). **Asst. Inspector of Sericulture:**

- Should supervise all the activities of the Operatives / Farm Foreman for production of targeted qualitative silk.
- Should maintain registers and records with up-to-date entries.
- Assist Inspector in purchase of cocoons and sale of silk yarn / bye-products.

c). Farm Foreman:

- Should supervise the activities of the Operatives for quality targeted production.
- Should conduct cocoon assessment for production of required denier silk.
- Should attend stocks and stores in supply cocoons.

d). Boiler Mechanic:

- Should operate the boiler for timely release of steam for cooking / reeling.
- Should attend repairs to reeling machinery and ensure smooth running of the machine.

f). Operative:

- Should attend the sorting of cocoons immediately after arrival of the cocoons to the reeling unit.
- Should attend the stifling, drying and preservation of cocoons including by-products systematically.
- Should attend cooking and supply required cocoons to reelers.
- Should supervise all the reeling activities for quality targeted production.

8) CB Cocoon Markets:

a) Inspector of Sericulture:

- Should supervise all the activities of the market and the staff.
- Should maintain the attendance of staff.
- Should remit day-to-day receipts regularly.
- Should update registers and records.
- Should maintain grievances register and take suitable measures.
- Should maintain discipline and decorum of the office / market.
- Shall seize the unauthorised manufacture / sale transport the Silk worm seed as per the procedure laid down A.P. Silk worm seed and Cocoon control Act 1956 and Rules 1983.
- Shall ensure the disposal of cocoons in regularised cocoon markets laid down A.P. Silk worm seed and Cocoon control Act 1956 and Rules 1983.
- Shall initiate processing of application for issue of licence under the laid down A.P. Silk worm seed and Cocoon control Act 1956 and Rules 1983.
- Shall initiate processing of application for renewal of license under the Rules laid down A.P. Silk worm seed and Cocoon control Act 1956 and Rules 1983.

b) Asst. Inspector of Sericulture

- Should conduct lot-wise quality testing to know the quality parameters.
- Should conduct pupal test for diseases, if any.
- Should arrange for transfer of technology through audio & video aids.
- Should maintain the registers and records and up-date them regularly.

c) Farm Foreman:

- Should supervise all the activities of the Operatives for smooth conduct of transaction.
- Should conduct testing of cocoons for Shell Ratio % / Renditta.
- Should weigh the cocoons immediately after auction.
- Should prepare the bills immediately after the weighment and make payment as early as possible preferably through bank extension counters.
- Should up-date the day to day transactions in registers and records.
- Should exhibit latest cocoon transaction rates on the notice board.

d) Operative:

- Should guide the farmers and assist them in lots arrangement.
- Should issue bidding slips and maintain the premises clean and hygienic duly collecting uzi maggots from time to time and burning them.

9) Technical Service Centres (Non-Farm):

a) Asst. Inspector of Sericulture (TSC-Incharge):

- Should supervise all the activities of FFM / Operatives to achieve the targets.
- Should maintain attendance of staff.
- Should conduct productivity clubs and communicate minutes to Higher Officers.
- Should update the registers and records.
- Maintain discipline and decorum of the office.
- Assist the entrepreneur in processing / sanction of loans and in grounding the units.
- Shall initiate processing of application for renewal of license under the Rules laid down A.P. Silk worm seed and Cocoon control Act 1956 and Rules 1983.

b) Farm Foreman:

- Should achieve the targets fixed fully under establishment of reeling basins, twisting spindles etc.
- Should assist the Unit Incharge in identification of Entrepreneurs and grounding of the schemes.
- Should communicate the latest technology to the entrepreneurs.
- Should collect the technical data and submit to higher Officers.
- Should assist the Incharge in organising productivity clubs.
- Should assist unit incharge in quality testing of raw silk, water etc.

c) Operative:

- Should achieve the targets fixed fully under establishment of reeling basins, twisting spindles etc.
- Should assist the Unit Incharge in identification of Entrepreneurs and grounding of the schemes.
- Should communicate the latest technology to the entrepreneurs.
- Should collect the technical data and submit to higher Officers.

10) Tasar Seed Stations:

a) Asst. Inspector of Sericulture (TSC-Incharge):

- Should supervise all the activities of FFM / Operatives to achieve the targets.
- Should maintain attendance of FFM / Operatives.
- Should identify suitable rearers for 1st, 2nd and 3rd crops.
- Should implement all the Government schemes.
- Should conduct demonstrations on new technology in rearing, reeling etc.
- Should enter the data in computers and submit to Higher Officers.
- Should maintain discipline and decorum of the office.
- Should review and approve tour diaries of subordinate staff.

b) Farm Foreman:

- Should attend disinfection of grainage building and equipment.
- Should assist in procurement and selection of seed cocoons.
- Should preserve the seed cocoons systematically.
- Should assist in production, pupal testing, surface disinfection etc.
- Should conduct pupal test as per norms.
- Should maintain stocks and stores.
- Assist the Tasar rearers in conducting disinfection and maintaining hygiene conditions.
- Supply DFLs timely to the rearers as per the targets.
- Should collect the diseased larvae for testing and assist the farmers in harvesting and marketing of cocoons.
- Should obtain technical data from the rearers and submit to his Officers.

c) Operative:

- Should attend disinfection of grainage building and equipment.
- Should assist in procurement and selection of seed cocoons.
- Should preserve the seed cocoons systematically.
- Should assist in production, pupal testing, surface disinfection etc.
- Assist the Tasar rearers in conducting disinfection and maintaining hygiene conditions.
- Supply DFLs timely to the rearers as per the targets.
- Should collect the diseased larvae for testing and assist the farmers in harvesting and marketing of cocoons.
- Should obtain technical data from the rearers and submit to his Officers.

11) **Regional Training Centres:**

a) **Sericulture officer :**

- Should supervise all the activities of TA / TO / ASO
- Should accompany the trainees for study tours.
- Should prepare training action plan every year in advance.
- Should maintain discipline and decorum in the Office.

b) **Asst. Sericulture Officer :**

- Should supervise all the activities of TO / Operatives to achieve the targets.
- Should maintain attendance of TO / TA.
- Should identify suitable rearers for 1st, 2nd and 3rd crops.
- Should implement all the Government schemes.
- Should conduct demonstrations on new technology in rearing, reeling etc.
- Should enter the data in computers and submit to Higher Officers.
- Should maintain discipline and decorum of the office.
- Should review and approve tour diaries of subordinate staff.

c) **Technical officer:**

- Should supervise the activities of TA.
- Assist the trainees in testing of pupae and moths.
- Should maintain hygienic conditions besides suitable temperature and relative humidity.
- Should maintain stores and stocks.
- Should arrange for demonstrations.
- Should maintain library systematically.

d) **Technical Asst.:**

- Should attend disinfection of rearing house and equipment as per norms.
- Assist trainees in incubation and black boxing of eggs for uniform hatching.
- Should attend rearings along with trainees and assist them in silkworm techniques.
- Should ensure timely irrigation and adoption of package of practices.

12 **Reelers Training Institute:**

a) **Asst. Director of Sericulture**

- Should supervise all the activities of the Staff working in the Institute.
- Should prepare Training action plan.
- Should collect feed back from the trainees on the impact of the training.
- Should maintain the discipline and decorum of the Institute.

b) Sericulture Officer

- Should supervise all the activities of TA and TO
- Should maintain records and registers
- Should arrange demonstration and accompany the trainees in Study tours.
- Assist in preparation of Training action plan.

c) Technical officer

- Should supervise the activities of the TA and assist the trainees in acquiring the skills
- Should maintain stocks, stores and Library systematically.
- Should purchase raw materials required and preserve properly,

d) Technical Assistant:

- Should arrange raw material and related material for conduct of training.
- Should maintain machinery / equipment work worthy.

13) Mobile Farmers Training Unit.

a) Asst. Director of Sericulture

- Should implement Action plan in conduct of training programmes
- Should supervise the activities of staff working under his control
- Should maintain discipline and decorum of the office
- Should participate in Mobile tours / Productivity clubs / Farmers meets / Work shops / Exhibitions etc. and popularise new technologies.
- Should review the Tour dairies of subordinate staff.

b) Asst., Sericulture Officer;

- Should supervise all the activities of the TA and TO.
- Should accompany along with Mobile unit to the tours.
- Should assist in conducting Exhibitions and Film Shows.
- Should assist in collecting feed back
- Should maintain audio visual equipment properly.
- Should maintain all the Registers in the Office.
- Should maintain stocks and stores.
- Should popularise new technologies through publicity

c) Technical Officer

- Should supervise the activities of TA.
- Should accompany along with Mobile unit to the tours.
- Should assist in conducting Exhibitions and Film Shows.
- Should assist in collecting feed back
- Should maintain audio visual equipment properly.
- Should maintain all the Registers in the Office.

d) Technical Asst.

- Should accompany along with Mobile unit to the tours.
- Should assist in conducting Exhibitions and Film Shows.
- Should assist in collecting feed back
- Should maintain audio visual equipment properly.

14. OFFICERS AND STAFF

A. HEAD OFFICE

a) Commissioner of Sericulture

- Supervise all the activities of the Department
- Liaison the Government in sanction of the schemes.
- Co-ordinate other related State and Central Govt offices in sanction of schemes.
- Maintain discipline and decorum of the Department.
- Issue / Renewal / Cancellation of licenses to Seed rearers, CB rearers, Reelers & Twisters, Grainages as per A.P. Silk Worm Seed Cocoon control Act 1956 and Rules 1983.
- Shall discharge duties as per A.P. Co-operative Act 1964 in respect of Registration of Co.Operative Societies, amendment to Bylaws, appointment of enquiry officer, inspection, surcharge orders, winding of societies, appointment liquidator, appeals, revision, review.

b) Addl. Director of Sericulture

- Supervise all the staff and officers working in the Department.
- Assist the Director of Sericulture in discharging technical, administrative, Co-operative and Accounts duties.
- Assist the Director to maintain discipline and decorum of the Office
- Perform inspections of various units of the Department.

c) Joint Director of Sericulture

- Supervise all the staff and officers working under his control.
- Assist the Director of Sericulture / Addl. Director (s) in discharging technical, administrative, duties.
- Assist the Director / Addl. Director of Sericulture to maintain discipline and decorum of the Office
- Perform inspections of various units of the Department.

d) Dy. Director (Co-operation)

- Supervise all the staff and officers working under his control.
- Assist the Director of Sericulture / Addl. Director (s) in discharging Co-operative duties.
- Assist the Director / Addl. Director of Sericulture to maintain discipline and decorum of the Office
- Conduct inspections of Co-operative Societies

e) Asst. Director of Sericulture (Technical)

- Supervise all the staff and officers working under his control.
- Assist the Director of Sericulture / Addl. Director (s) / Joint Director (s) in discharging Technical duties.
- Assist the Director / Addl. Director of Sericulture / Joint Director (s) to maintain discipline and decorum of the Office
- Conduct inspections of Departmental units.

f). Asst. Director of Sericulture (Non-technical)

- Supervise all the staff and officers working under his control.
- Assist the Director of Sericulture / Addl. Director (s) / Joint Director (s) in discharging Technical duties.
- Assist the Director / Addl. Director of Sericulture / Joint Director (s) to maintain discipline and decorum of the Office
- Conduct inspections of Offices.

g) Sericulture officer working in the Offices

- Shall assist the immediate officers in discharging various duties
- Shall process all the technical files of the office
- Shall maintain discipline and decorum of the Office.
- Shall make inspection of the units as instructed.

h).Superintendents

- Shall assist the immediate officers in discharging various duties
- Shall process all the files of the office
- Shall maintain discipline and decorum of the Office.
- Shall make inspection of the Offices as instructed.

i) Asst. Sericulture Officer working in the Offices

- Shall assist the immediate officers in discharging various duties
- Shall process all the technical files of the office
- Shall maintain discipline and decorum of the Office.
- Shall make inspection of the units as instructed.

j) Sr. Assts

- Shall assist the immediate officers in discharging various duties
- Shall process all the files of the office
- Shall maintain discipline and decorum of the Office.
- Shall make inspection of the Offices as instructed.

k) Technical officer

- Shall assist the immediate officers in discharging various duties
- Shall process all the technical files of the office
- Shall maintain discipline and decorum of the Office.

l) Jr. Assts.

- Shall assist the immediate officers in discharging various duties
- Shall process all the files of the office
- Shall maintain discipline and decorum of the Office.
- Shall make inspection of the Offices as instructed.

B. REGIONAL OFFICE

a) Regional joint Director of Sericulture

- Supervise all the activities of the Department in his region.
- Liaison the Director in implementation of the schemes.
- Shall inspect all the offices and units for better functioning.
- Co-ordinate other related State and Central Govt offices in sanction of schemes.
- Maintain discipline and decorum of the Department in his region.
- Issue and Renewal of licenses to Seed rearers, CB rearers, Reelers & Twisters, as per A.P. Silk Worm Seed Cocoon control Act 1956 and Rules 1983.
- Shall assist the Director in discharging duties as per A.P. Co-operative Act 1964 in respect of Registration of Co-operative Societies, amendment to Bylaws, appointment of enquiry officer, inspection, surcharge orders, winding of societies, appointment liquidator, appeals, revision, review.

b) Dy. Director of Sericulture

- Supervise all the activities of the Department in his jurisdiction
- Shall implement all the approved schemes in time.
- Co-ordinate other related State and Central Govt offices in sanction of schemes.
- Shall inspect all the offices and units for better functioning
- Maintain discipline and decorum of the Department in his jurisdiction.

c) Asst. Director of Sericulture

- Supervise all the activities of the Department in his jurisdiction
- Shall implement all the approved schemes in time.
- Shall inspect all the offices and units for better functioning
- Co-ordinate other related State and Central Govt offices in sanction of schemes.
- Maintain discipline and decorum of the Department in his jurisdiction.

d) Sericulture Officer working in the Offices

- Shall assist the immediate officers in discharging various duties
- Shall process all the technical files of the office
- Shall maintain discipline and decorum of the Office.
- Shall make inspection of the units as instructed.

e) Superintendents

- Shall assist the immediate officers in discharging various duties
- Shall process all the files of the office
- Shall maintain discipline and decorum of the Office.
- Shall make inspection of the Offices as instructed.

f) Asst. Sericulture Officer working in the Offices

- Shall assist the immediate officers in discharging various duties
- Shall process all the technical files of the office
- Shall maintain discipline and decorum of the Office.
- Shall make inspection of the units as instructed.

g) Sr. Assts

- Shall assist the immediate officers in discharging various duties
- Shall process all the files of the office
- Shall maintain discipline and decorum of the Office.
- Shall make inspection of the Offices as instructed.

h) Technical Officer

- Shall assist the immediate officers in discharging various duties
- Shall process all the technical files of the office
- Shall maintain discipline and decorum of the Office.

i) Jr. Assts.

- Shall assist the immediate officers in discharging various duties
- Shall process all the files of the office
- Shall maintain discipline and decorum of the Office.
- Shall make inspection of the Offices as instructed.

C). ZONAL OFFICE / DY. DIRECTOR OF SERICULTURE

a) Dy. Director of Sericulture

- Supervise all the activities of the Department in his jurisdiction
- Shall implement all the approved schemes in time.
- Co-ordinate other related State and Central Govt offices in sanction of schemes.
- Shall inspect all the offices and units for better functioning
- Maintain discipline and decorum of the Department in his jurisdiction.
- Issue of licenses to CB rearers as per A.P. Silk Worm Seed Cocoon control Act 1956 and Rules 1983.
- Shall discharge duties as per A.P. Co-operative Act 1964 in respect of Amendment to Bylaws, appointment of enquiry officer, inspection, surcharge orders & appointment of liquidator.

b) Asst. Director of Sericulture

- Supervise all the activities of the Department in his jurisdiction
- Shall implement all the approved schemes in time.
- Shall inspect all the offices and units for better functioning
- Co-ordinate other related State and Central Govt offices in sanction of schemes.
- Maintain discipline and decorum of the Department in his jurisdiction.

c) Sericulture Officer working in the Offices

- Shall assist the immediate officers in discharging various duties
- Shall process all the technical files of the office
- Shall maintain discipline and decorum of the Office.
- Shall make inspection of the units as instructed.

d) Superintendents

- Shall assist the immediate officers in discharging various duties
- Shall process all the files of the office
- Shall maintain discipline and decorum of the Office.
- Shall make inspection of the Offices as instructed.

e) Asst. Sericulture officer working in the Offices

- Shall assist the immediate officers in discharging various duties
- Shall process all the technical files of the office
- Shall maintain discipline and decorum of the Office.
- Shall make inspection of the units as instructed.

f) Sr. Assts

- Shall assist the immediate officers in discharging various duties
- Shall process all the files of the office
- Shall maintain discipline and decorum of the Office.
- Shall make inspection of the Offices as instructed.

g) Technical Officer

- Shall assist the immediate officers in discharging various duties
- Shall process all the technical files of the office
- Shall maintain discipline and decorum of the Office.

h) Jr. Assts.

- Shall assist the immediate officers in discharging various duties
- Shall process all the files of the office
- Shall maintain discipline and decorum of the Office.
- Shall make inspection of the Offices as instructed.

**D). DISTRICT OFFICE / DIVISIONAL OFFICE /
ASST. DIRECTOR OF SERICULTURE**

a) Asst. Director of Sericulture

- Supervise all the activities of the Department in his jurisdiction
- Shall implement all the approved schemes in time.
- Shall inspect all the offices and units for better functioning
- Co-ordinate other related State and Central Govt offices in sanction of schemes.
- Maintain discipline and decorum of the Department in his jurisdiction.
- Issue of licenses to CB rearers as per A.P. Silk Worm Seed Cocoon control Act 1956 and Rules 1983.
- Shall discharge duties as per A.P. Co-operative Act 1964 in respect of Amendment to Bylaws, appointment of enquiry officer, inspection, surcharge orders & appointment of liquidator.

b) Sericulture Officer working in the Offices

- Shall assist the immediate officers in discharging various duties
- Shall process all the technical files of the office
- Shall maintain discipline and decorum of the Office.
- Shall make inspection of the units as instructed.

c) Superintendents

- Shall assist the immediate officers in discharging various duties
- Shall process all the files of the office
- Shall maintain discipline and decorum of the Office.
- Shall make inspection of the Offices as instructed.

d) Asst. Sericulture Officer working in the Offices

- Shall assist the immediate officers in discharging various duties
- Shall process all the technical files of the office
- Shall maintain discipline and decorum of the Office.
- Shall make inspection of the units as instructed.

e) Sr. Assts

- Shall assist the immediate officers in discharging various duties
- Shall process all the files of the office
- Shall maintain discipline and decorum of the Office.
- Shall make inspection of the Offices as instructed.

f) Technical Officer

- Shall assist the immediate officers in discharging various duties
- Shall process all the technical files of the office
- Shall maintain discipline and decorum of the Office.

g) Jr. Assts.

- Shall assist the immediate officers in discharging various duties
- Shall process all the files of the office
- Shall maintain discipline and decorum of the Office.
- Shall make inspection of the Offices as instructed.

MAJOR ENACTMENTS, RULES AND REGULATIONS

The Department of Sericulture is governed with following Acts for discharging various duties.

1. A.P. Silkworm Seed and Cocoon (Control) Act 1956
2. A.P. Co-operative Societies Act 1964.

Some of the important sections, powers and powers vested under the Acts to the Officers are indicated below.

SECTION UNDER THE ACT	POWERS UNDER THE SECTION	POWERS VESTED WITH
A. P. Silkworm Seed and Cocoon (Control) Act 1956 and read with A.P. Silkworm seed and Cocoon (Control) Rules 1983.		
Section. 2 of the Act and Rule 5 of Rules	Issue of Licenses A) Seed Rearers	Director of Sericulture Regl. Jt. Director (s)
	B) CB Rearers	Director of Sericulture Asst / Dy. Director (s)
	C) Reelers / Twisters	Director of Sericulture Regl. Jt. Director (s)
Section. 2 of the Act and Rule 7 of Rules	Renewal of Licenses A) Seed Rearers	Director of Sericulture Regl. Jt. Director (s) / Asst./ Dy. Director (s)
	B) CB Rearers	Director of Sericulture Asst / Dy. Director (s)
	C) Reelers / Twisters	Director of Sericulture Regl. Jt. Director (s) Asst./ Dy. Director (s)
Section 10-A of Act	Suspension and Cancellation of Licences A) Seed Rearers	Director of Sericulture
	B) CB Rearers	Director of Sericulture
	C) Reelers / Twisters	Director of Sericulture

SECTION UNDER THE ACT	POWERS UNDER THE SECTION	POWERS VESTED WITH
A. P. Silkworm Seed and Cocoon (Control) Act 1956 and read with A.P. Silkworm seed and Cocoon (Control) Rules 1983.		
Section 4 of the Act and Rule 3 of Rules	Issue of license to the Private silkworm seed producers	Director of Sericulture
Section 7 of the Act and Rule 7 of Rules	Renewal of license to the Private silkworm seed producers	Director of Sericulture
A.P.Co-operative Societies ACT		
Section 7, 8	Registration and Registration certificate	Director of Sericulture
Section 16	Amendment to Bye-laws	Director of Sericulture Asst / Dy. Director (s)
Section 51	Appointment of Enquiry officer	Director of Sericulture Asst / Dy. Director (s)
Section 52	Conduct of inspections	Director of Sericulture Asst / Dy. Director (s)
Section 60	Surcharge orders	Director of Sericulture Asst / Dy. Director (s)
Section 64	Winding of Societies	Director of Sericulture
Section 65	Appointment of Liquidator	Director of Sericulture Asst / Dy. Director (s)
Section 76	Appeals	Director of Sericulture
Section 77	Revision	Director of Sericulture
Section 78	Review	Director of Sericulture

For other powers under the above Acts may be referred in the provisions of the Acts.

AREAS OF INTERFACE

The Department has been promoting Sericulture with help various organisations / Department as detailed hereunder.

Sl No.	Organisation	Areas of Interface	Authority
1	District Rural Development Agency	Sanction of subsidies to beneficiaries.	Project Director
2	District Tribal Development Agency	Sanction of Subsidies to beneficiaries.	Project Officer
3	District SC Services Co.op Society	Sanction of subsidies to SC beneficiaries	Executive Director
4	District Lead Bank office	Sanction of Loan to beneficiaries.	Lead Bank Officer
5	District B.C.Service Co.Op Society	Sanction of subsidies to beneficiaries	Executive officer
6	District Women Co.op Finance Corporation	Sanction of Loans to beneficiaries	Executive officer
7	District Industries Centres	Sanction of centre subsidy to beneficiaries	General Manager
8	National Agriculture Banking for Rural Development (NABARD)	Fixation of Unit cost.	Chief Manager
9	District society for employment and Training	Organisation of different trainings.	Chief Executive Officer
10	National Institute of Rural Development	Organisation to the Extension staff	Director General
11	Dr.M.H.R.D. Institute , A.P., Hyderabad	Organisation of Different trainings.	Director General
12	Central Silk Board	Sanction of funds / Organisation of Trainings	Member Secretary
13	Institute of Co-operative Management	Organisation of Trainings.	Principal
14	Swiss Agency for Development and co-operation.	Sanction of funds.	Programme Officer
15	Andhra Pradesh Industrial and Technical Consultancy organisation	Consultancy and organisation of Trainings.	Managing Director
16	Panchayatraj and Rural Development	Forwardal of application of Sericulture beneficiaries to the concerned agencies.	Mandal Development Officer

The Government of Andhra Pradesh have constituted a District level Sericulture Committee under the Chairman Ship of the concerned District Collector. This Committee will monitor implementation of various Sericulture developmental activities. The Committee Co-ordinates the above departments to sort out the problems of the clients of the department i.e. Sericulture Silk Reelers, Weavers, Twisters etc.,

VISION OF THE DEPARTMENT :

The Vision of the Sericulture Department is projected here under.

- The present area of 1.05 lakh acres under mulberry cultivation will be increased to more than 2.00 lakh acres by the end of 2020.
- The present unit area brushing of 1000 CBDFLs per acre will be increased up to 1500 DFLs by the end of 2020.
- The present cocoon production of 40 Kgs per 100 dfls will be increased to 80 Kgs.
- The Non Farm sector will also be developed in the State on par with on-farm development.

CONSTRAINTS BEING FACED BY THE DEPARTMENT.

- ⇒ Degradation of land and rapid depletion of water levels due to over exploitation of natural resources.
- ⇒ Adversely affected productivity levels due to unhygienic conditions prevailing in the villages.
- ⇒ Non adaptation of labour saving technologies like shoot and shelf rearing, modern mechanism of agricultural practices.
- ⇒ Lack of drought resistant, disease resistant Mulberry and Silkworm strains.
- ⇒ Lack of bivoltine races suitable even for the high temperatures.
- ⇒ Inadequate development of post cocoon activity i.e., Reeling, Twisting and Weaving.
- ⇒ Bulk production of inferior quality silk mostly from Multivoltine races causing Power looms sector to suffer from want of adequate quality silk.
- ⇒ Lack of enough encouragement for production of bivoltine cocoons production required for Power loom sector.
- ⇒ Lack of proper market linkages.
- ⇒ Slow adaptation of Improved technologies by beneficiaries / entrepreneurs.
- ⇒ Lack of timely effective transfer of technology resulting in low yields, and in high cost of production.
- ⇒ Corporate sectors are not encouraged by providing required facilities for import of machinery and integrated sericulture technology.
- ⇒ Reluctance of Bankers to finance for setting up of machinery or for reviving sick units.
- ⇒ Underutilisation of the bye-products, leading to their export in raw condition.
- ⇒ Slower rate of dissemination of strains of mulberry and silkworm races developed in Research Institutes from laboratory to field.

STEPS REQUIRED TO OVERCOME CONSTRAINTS.

- ⇒ Effective implementation of transfer of technology.
- ⇒ Evaluation of drought resistant, season specific mulberry strains / silkworm races,.
- ⇒ Promotion of high yielding mulberry varieties, Silkworm races after successful field trials.
- ⇒ Promotion of Bivoltine cocoon production and production of International grade silk.
- ⇒ Maximum utilisation of Extension staff for faster dissemination of strains of mulberry and silkworm races.
- ⇒ Strengthening of Research Institutes for faster evaluation of improved strains.
- ⇒ Promotion of large scale and contract farming.
- ⇒ Bridging the gap between on-farm sector and non-farm sector by facilitating Bank finance for setting up of Improved / Imported machines.
- ⇒ Revival of sick units with liberal finance from concerned financial agencies.
- ⇒ Promotion of Non-farm sector, by setting up of Integrated units, Power looms, with Cloth processing and design development additions.
- ⇒ Utilisation of Bye-products to maximum extent indigenously by setting up of suitable units.
- ⇒ Providing effective market linkages for cocoon, silk and cloth.

VISION FOR 2005 AND 2020:

Andhra Pradesh has to meet not only the demand for low and high quality silk yarn and fabrics of the domestic market but will also make a bid to produce yarn and fabric for the international market. The goals that have been set for the State under mulberry acreage, leaf yields, production of CBDFLs, cocoon production, raw silk production, renditta etc. to be achieved by the year 2020 A.D. together with the present status are given below.

Sl No	ITEM	Status during 1998-99	Projection by 2005	Projection by the end of 2020 AD
	QUANTITY PARAMETERS			
1	Area under Mulberry (Acres)	1,05,785	1,35,844	2,46,478
2	Brushing of DFLs* (In lakh nos)	722.28	1331.27	3401.39
3	Cocoon Production (In tonnes)			
	a) Multivoltine	30,179	61,130	1,44,190
	b) Bivoltine	--	6,521	94,648
4	Raw Silk production (In tonnes)			
	a) Multivoltine	3335	6368	18,024
	b) Bivoltine	--	815	14,561
5	DFLs production (In Crores)	2.15	12.32	33.08
	PRODUCTIVITY PARAMETERS			
1	Leaf yield (in Kgs) per acre	5200	6600	12,000
2	Avg. no. of DFLs brushing per acre	682	1000 (800 in case of Bivol.)	1,500 (1200 in case of Bivol)
3	Cocoon yield per 100 dfls (in Kgs)	41.7	50.0 (60 in case of Bivol)	65 (80 in case of Bivol)
4	Avg. cocoon production per acre	285	498	969
5	Renditta**			
	a) Bivoltine x Bivoltine.	9.0	8.0	6.5
	a) Multivoltine x Bivoltine	10.0	9.6	8.0

* Disease Free Layings (Silkworm eggs).

** Quantity of fresh cocoons required for production of 1 Kg raw silk

STRATEGIES TO ACHIEVE PROJECTIONS

In order to achieve the above projections, the department has taken up following schemes, which benefit the sericulturists / reelers for increased productivity and Income levels.

ON-FARM TRAINING AND SUPPLY OF START UP TOOLS: The object of the scheme is to impart training to the new farmers and supply tool kits consisting of trays, mountages and basic disinfectants to uplift the income levels and living standards. Tool kits worth Rs. 1500/- will be supplied to sericulturists who have planted one acre of mulberry besides providing training for a period of 40 days with a stipend of Rs. 250/- per beneficiary.

DRIP IRRIGATION: Drip irrigation is new technology for most effective usage of water for irrigation facility. It is capable of providing the optimal quantity of water for each plant without wastage of water besides feeding soluble fertilizers to the plant. The unit cost of Drip irrigation is Rs. 20,000/- per acre. Out of the total unit cost 10% is beneficiary contribution and balance 90% is proposed to subsidised both by Central and State. @ 9:1 ratio.

CROP INSURANCE: The object of the scheme is to compensate the farmers against silkworm losses of both bivoltine seed and commercial crops covering right from silkworm eggs till disposal of cocoons as the silkworms are more susceptible for diseases. The sum assured for 100 Dfls is Rs. 1800/- The Insurance premium is 16% of the sum assured i.e., Rs. 288/- per 100 Dfls. The beneficiary contribution to the premium is 20% and the balance 80% will be shared equally by Central and State.

SUPPORT FOR PRE-REELING PRODUCTIVITY IMPROVEMENT MEASURES: The objective of the scheme is to provide assistance for construction of pucca rearing shed and supply of equipments for maintenance of optimum temperature and humidity for increased productivity. The scheme is implemented in Bivoltine areas of Andhra Pradesh. The unit cost of shed is Rs. 50,000/- and the cost of equipment is Rs. 10,500/-. The total cost will be shared equally by Central and State.

WOMEN DEVELOPMENT PROGRAMME: Sericulture is a labour intensive industry and 60% of its labour force comprises of women only. Therefore the department has taken up training programme for technology upgradation of women engaged in sericulture sector. It is also proposed to organise women groups with one time assistance of Rs. 25,000/- per group and providing training to women beneficiaries.

EXTENSION SUPPORT ACTIVITIES FOR PRODUCTIVITY CLUBS FOR CONDUCT OF FARMERS MEETS, STUDY TOURS AND DEMONSTRATION PLOTS UNDER ON FARM AND NON FARM SECTOR. The technology invented for increased output can be transmitted effectively through enlightening of farmers/Reelers by organising farmers meets/ Reelers meets / Group discussions with farmers/ Reelers to facilitate exchange their views and to discuss the new technology for subsequent adoption of suitable methods under supervision of Departmental personal. It is proposed to organise the study tours as "Seeing is believing". Main object of this component is to make the farmers exposed practically to the new technology for adoption in order to increase the productivity.

CONDUCT OF MASS DISINFECTION PROGRAMME FOR INCREASING PRODUCTIVITY: "Pebrine is a dreadful silkworm disease which is carried through seed or can be occurred through secondary infection. It can be controlled through disinfection of rearing sheds and rearing equipment used by the Sericulturists. Due to outbreak of pebrine disease, the silkworm crops are being affected and causing loss to the Sericulturists who are mostly small and marginal farmers. Hence the rearing house and the rearing equipment are to be disinfected.

ENTREPRENEURS DEVELOPMENT PROGRAMME: The Entrepreneurs Development Programmes are well structured programmes to provide opportunities to new entrepreneurs to start micro SSI ventures besides consolidating the existing ventures. It also facilitates, upgradation of existing ventures and transfer of technologies developed by the Research Institutes. It is proposed to cover 1/3 women beneficiaries under this scheme.

PROMOTION OF MULTIEND REELING MACHINES FOR PRODUCTION OF QUALITY YARN. In order to promote the international grade silk yarn production, the department is encouraging for setting up of 12 improved multiend reeling machines during the current year. The unit cost of 6 and 10 basin reeling units are Rs. 4.75 and 6.28 lakhs respectively with 10% beneficiary contribution, 15% subsidy each from Central Silk Board and State Governments, and balance 60% will be Interest free loan from C.S.B. The working capital required for running these units will be mobilised from the financial institutions under a special scheme wherein there is a provision to provide 50% of the proposed working capital as fixed deposit to the concerned financial Institute. The interest charged to the entrepreneur on the working capital over and above 10% of interest will be adjusted from the interest accrued on the fixed deposit made by the department.

INTEREST SUBSIDY ON CAPITAL INVESTMENT AND WORKING CAPITAL FOR SILK REELING AND TWISTING UNITS. Though Andhra Pradesh has made rapid strides in cocoon production, the post cocoon activity could not pick up on par with the on farm sector due to various problems. This has created a wide gap between production of cocoons and raw silk. About 60% of the cocoons produced in Andhra Pradesh are making way to Karanataka. Under these circumstances it is very much essential to encourage the potential entrepreneurs of A.P. to set up reeling and twisting units with in Andhra Pradesh so that the entire cocoon production is consumed locally. Hence it is proposed to subsidise the interest portion on both capital investment and working capital. The beneficiary has to bear a minimum of 10% interest on capital and working capital loans. This department will subsidise any portion / percentage of the balance interest rate as charged by the Financial Institutions.

QUALITY SILK YARN PURCHASE SYSTEM: The object of the scheme is to extend support for the yarn reeled or brought by the weavers so as to enable the producers to dispose of the yarn to agencies identified by the State or transacted through regulated Silk Exchanges on a quality linked price basis. 70% of the cost of silk will be released to reelers on pledging the silk.

SILK WEAVERS CO-OPERATIVE SOCIETIES: Andhra Pradesh is traditionally famous for silk weaving. Some of the silk weaving centres like Dharmavaram, Pochampalli, Gadwal, Narayanapet, Peddipuram etc., are renowned traditional weaving centres. In Andhra Pradesh 324 silk co-operative societies are registered covering about 30,000 silk hand-loom. About 70,000 silk weavers are engaged in silk fabric production out side co-operative fold.

The following schemes are being implemented by the Department of Sericulture for the development of silk hand loom co-operative societies in the State.

S.No	Name of the Scheme	Objective
1	Interest subsidy to Co-operative Central Banks.	To enable to provide 3% subsidy on interest charged by the DCCB on the working capital loan sanctioned by the NABARD to the Society.
2	Marketing Development Assistance	To provide better marketing facilities.
3	Thrift fund cum saving and security scheme to silk weaver co-operative societies	To help the weaver in their old age by providing assistance.

S.No	Name of the Scheme	Objective
4	Workshed cum House to Silk Weavers Co-operative sectors	Workshed and dwelling house at one place will provide better working place to increase their productivity both qualitatively and quantitatively.
5	Project Package scheme for Weavers	Comprehensive assistance to increase the artisan skills.
6	Project Package scheme for establishment of Handloom Development Centres and Quality Dyeing units	To enable the weaver to learn modern methods of dyeing techniques required to compete in the markets.

Tasar silk industry : Andhra Pradesh has the privilege of producing another type of silk called Tasar silk apart from mulberry, which is locally called as dasali pattu. Tasar is concentrated mainly in the districts of Telangana i.e., Adilabad, karimnagar, Warangal and Khammam and in few pockets of north coastal region of East. Godavari and Visakhapatnam. There are 14 Pilot Project Centres in the state for 3000 tasar tribal rearers. The Pilot Project Centres will produce / procure required Tasar seed and supply to the rearers and render technical guidance to them in conducting tasar silk worm rearing and cocoon production. The PPCs also conduct market transactions.

BIVOLTINE PRODUCTION: The productivity per 100 Dfls in India is ranging between 35 to 40 Kgs. The silk produced in India is mostly on Country charkas and are in multi-bi hybrids in nature, which is inferior in quality and not fit for power looms. At present India is having only few multivoltine and bivoltine races which are lesser in productivity and quality. However, the productivity can be increased upto 45 to 50 kgs with the help of transfer of technologies recently evolved by the Research Institutes. Due to liberalisation policy adopted by the Government, the imports of raw silk have been considerably increased from 1380 MTs in the year 1990 to 2911 Mts in the year 1997 and much inferior quality silk also with cheaper rate smuggled into India across the borders. This hampered the development of industry and farmers are forced to uproot the mulberry gardens and switchover to other crops. Hence it is proposed to introduce high yielding Bivoltine varieties so as to produce International quality silk.