**Introduction:**

India is the Second largest producer of the Silk in the World next only to China. China has an advantage for production of Bivoltine silk due to its climate has the Bivoltine silkworm races are more adoptable to temperate climate. Due to the R&D efforts in India in the last two decades, Scientists have evolved suitable Bivoltine races for tropical climate in our country. Hence the production of Bivoltine silk in India is increasing. It may take another 10 years to make India self-sufficient in silk production as the country is the largest consumer of silk yarn because of the presence of large number of weavers spread across all states in the country. Besides the domestic production of silk fabrics in the Handloom and Power loom sector, our country earns substantial foreign exchange of Rupees 6500 crores per annum by exporting Silk garments. Ministry of Textiles / Central Silk Board / State Departments are striving to produce high quality Bivoltine silk to reduce the dependency of imports from China. In the last 2 years, imports from China have substantially reduced due to competition from Indian Silk Industry which is fully geared to producing 3A grade high quality Raw Silk at competitive prices. Efforts of Central Silk Board and State Departments in reaching Farmers, Reelers and Weavers with appropriate and modern technologies creating positive impact on quality Bivoltine Silk production.

Andhra Pradesh is one of the leading producers of Bivoltine silk next only to Tamil Nadu. More than 1.0 lakh farmers are growing Mulberry and producing at least 4-5 crops of Bivoltine cocoons from September to February (during the winter season). The state has the advantage of having large number of Silk weavers pockets in Dharmavaram, Pochampally, Kothakota, Uppada and Peddapuram. Reeling industry is well developed in Anantapur and Chittoor districts and there is a very well established system of providing direct markets to Sericulture farmers in Government Cocoon Markets where the reelers purchase cocoons through a system of competitive bidding process. Government is also encouraging farmers by providing production incentives since 2008 under Centrally sponsored CDP Scheme.
Sharing of Benefits in Sericulture Department:

Sericulture is a highly labour intensive industry in all its phases right from Mulberry Cultivation, Silk worm rearing, silk reeling, silk twisting and silk weaving & dyeing and it is giving employment particularly to small and marginal farmers mostly women. The department is bringing 10,000 to 12,000 acres every year under mulberry cultivation and for production of BVH Cocoons to produce BV raw silk of international standards. The department is not in a position to provide assistance to all the farmers due to Budget constraints for activities like Supply of Silk worm eggs / Chawkie worms to Mulberry and Tasar farmers, Supply of disinfectants, Integrated Nutrition Management, Integrated Pest Management Practices etc. In addition to these, there are certain gaps in maintenance of the infrastructure such as Seed Farms for production of quality Mulberry seedlings and Silk worm seed. Hence the critical interventions required for production of Bivoltine silk in Mulberry is proposed for assistance under RKVY and these components are not covered under any other programme of the Department.

The following Sericulture Schemes are proposed to be included under RKVY during 2013-14.

The scheme wise justification amounts proposed and expected benefit to the farmers on implementation is shown hereunder.


**Mulberry Sector – Infrastructure Development**

1) **Infrastructure improvement to the Bivoltine Rearing Sheds / Verandah:**

Rearing Shed is the most essential infrastructure for production of Quality Bivoltine cocoons. Farmer has to invest substantial amounts for construction of Rearing Sheds. Bivoltine races grow well in temperate climate and atmospheric humidity and temperature play an important role in quality production. Rearing shed. If rearing sheds are provided with Verandah on both the sides, temperature in the shed can be brought down by 2 or 3° C. Farmer will also get extra space for storage of fresh mulberry leaf, rearing equipment and drying of cocoons and the facility will substantially improve not only the quality bivoltine production but also increases the crop yields by at least 25-30 Kgs of cocoons which means Rs. 5,000/- to 6,000/- per each crop. Hence it is proposed to construct a verandah with a plinth area of 1,000 sq.ft, the unit cost of each shed is Rs.45,000/- and it is proposed to provide Verandahs to 1200 no. of Rearing sheds. The amount proposed under RKVY is Rs. 270.00 lakhs (50% assistance from RKVY and 50 % from farmers contribution).

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<th>The amount required is Rs 270.00 Lakhs for 1200 no. of Rearing Sheds.</th>
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*Mulberry Plantation and Rearing Shed in T.S Agraaram (V), Chittoor Dist.*
2) Infrastructure improvement to Government Seed Farms for production of chawkie worms for supply to farmers:

Supply of good quality Chawkie worms (Silkworm Seed) is a critical intervention for production of Bivoltine Silk. The young age silk worms have to be reared with utmost care and parameters like leaf quality (tender and nutritious), humidity and temperature are critical factors. Though private Chawkie Rearing Units have been established in the traditional sericulture pockets, in most of the Non-traditional areas, Government Seed Farms take up the responsibility of supplying Chawkie worms to Bivoltine farmers since establishment of chawkie rearing unit under the private sector may not be economically feasible. Hence it is proposed to improve existing infrastructure in Government Seed Farms for production of chawkie worms for supply to farmers.

Unit cost for chawkie rearing centre is Rs.2.50 lakhs and the amounts will be spent for construction of stands, procurement of Chawkie rearing equipment like Trays, humidifier, thermometers etc. Hence it is proposed to provide Chawkie rearing infrastructure to 20 Govt. Seed Farms.

The amount proposed under RKVY is Rs. 50 lakhs (100% support)
3) Assistance to Farm equipment like Humidifiers / Leaf Chopping Machines / Power Sprayers / Brush cutters to Govt. Seed Farms

Govt. Seed Farms supply Mulberry saplings to farmers for growing plantations. Bivoltine Chawkie worms (Silkworm Seed) is also supplied to farmers for production of quality Bivoltine cocoons. Labor scarcity is experienced especially at the time of planting nursery stock and rearing young age silkworms. Hence it is proposed to procure farm equipments like Humidifiers / Leaf chopping Machines / Power Sprayers / Brush cutters for production of quality bivoltine silkworm seed, maintenance of temperature and relative humidity is very critical inside the Chawkie rearing house. It is proposed to procure humidifiers and leaf chopping machines to the chawkie rearing houses in Govt. Seed Farms for supply of quality silkworm seed to farmers.

Under RKVY it is proposed to cover 20 Govt. Seed Farms with the unit cost of Rs.1.00 lakhs and the total outlay is Rs.20.00 lakhs.

The amount proposed under RKVY is Rs. 20 lakhs (100% support)

4) Support to Govt. Seed Farms for improvement of soil Health with Micronutrients:

In order to serve the farming community with improved quality inputs like Mulberry saplings and silkworm seed, it is essential to maintain the soil health in the Govt. Seed Farms by providing supplementary nutrients like Neem Cake, Poshan, Navenya, Trichoderma viridi, Bio fertilizers, organic compost etc.

It is proposed to cover 40 Govt. Seed Farms and the unit cost for procurement of micronutrients is Rs.0.50 lakh and the total outlay is Rs. 20.00 lakhs.

The amount proposed under RKVY is Rs. 20.0 lakhs (100% support)

Application of compost and micronutrients to Mulberry farms
Components for Mulberry (Growth Sector)

1) Subsidy for Bivoltine Seed (Chawkie)

Rearing of young age silkworms is an activity that requires high precision and care. The input cost like cost of labor, fertilizers, power bills and other inputs are increasing and farmers are unable to procure silkworm seed due to ever increasing prices. In order to reduce the burden of farmers in procuring seed, it is proposed to subsidize the cost silkworm seed @ Rs.750/- (per 100 DFLs). Assistance under RKVY is 50% i.e. Rs.1,500/- per 100 DFLs in a year and it is proposed to cover 11,000 units and the total outlay is Rs.165.00 lakhs.

The amount proposed under RKVY is Rs. 82.5 lakhs (50% support)

Chawkie Rearing Centre in Palamner of Chittoor District (T.S Agraharam)

Funding Pattern (in Rs. Lakhs)

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<tr>
<td>RKVY</td>
<td>442.50</td>
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<tr>
<td>CSB / Beneficiary contribution</td>
<td>352.50</td>
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<td>TOTAL</td>
<td>795.00</td>
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**Impact of the project:**

- Infrastructure support to Rearing sheds will improve the quality and quantity of bivoltine Seed production in the state which will reduce the dependency on import of silk from China.

- State owned Sericulture farms will be equipped to supply good quality planting stock and silkworm seed to the farmers to enable them to produce high quality bivoltine silk. This will be made possible by improving the infrastructure in the State Seed Farms besides improving the Soil fertility.

- Silkworm seed is a critical component in production of high quality bivoltine mulberry and tasar silk. Since the input costs and labor costs are ever increasing in Seed production activity, subsidizing the cost of seed will be a critical intervention for reducing the input cost to the farmer and improving the profit margins.