*Intercropping of gram in mulberry*

# SERICULTURE - A REASON FOR FARMERS' SMILE

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In recent years, concerted efforts are being made to introduce mulberry sericulture in Vidarbha region of Maharashtra. Sericulture though a relatively new venture for the local farmers, has enough potential to generate employment for thousands of unemployed youth and thereby improve the living conditions of the local farmers.

**The farmers of Vidarbha region hardly knew that their future is set to witness a grand change when they took to sericulture and they got rid of decade old problem of poverty and uncertainties of traditional agriculture. Presented here is a success story of sericulture that brought back the lost smiles on their faces.**

### Rain uncertain

The rainfed agriculture in semi-arid tract (SAT) and dry sub-humid eco-system has been facing uncertainty of monsoon (both dry and humid periods of undesirable length), right from sowing to harvesting, on one hand and became the victim of insects, pests and diseases, on the other. The unpredicted altered moisture regime causes huge loss to farmers and makes them unable to stand on their own unless there is support from the government and other agencies. In recent years, due to high cost of production and uneconomical yields of cotton and orange in the area, the farmers are increasingly becoming debt ridden and are on the look out for some alternative crops.

Realizing the apathy of farmers, National Bureau of Soil Survey and Land Use Planning (NBSS & LUP) joined hands with Department of Sericulture, Govt. of Maharashtra to promote and popularize mulberry sericulture under National Agriculture Technology Project for Technology Assessment and Refinement through Institute-Village Linkage programme (NATP-TAR-IVLP). Series of training programmes, exposure visits and focused group discussions with successful sericulturists of the region were organized to boost the morale and instill confidence among the innovative farmers of Kokarda, Kaniyadol and Panubali villages of Kalmeshwar taluk in Nagpur district.

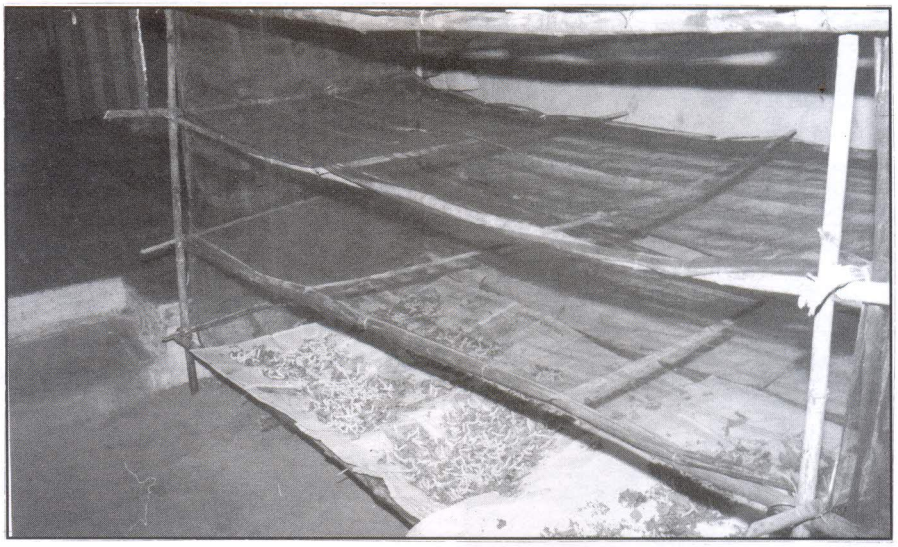
### Sericulture – New venture

Initially, farmers planted mulberry cuttings in an area of 0.5 to 1 acre in paired rows, which helped them to grow some vegetables and pulses as intercrop. After the establishment of mulberry plantation, farmers started rearing of silkworms in their own dwelling houses with less number of disease free layings (dfls). And, it did not take long time for them to realize that sericulture is more economical and remunerative. Soon they could make use of the subsidy given by the government and constructed rearing houses and equip themselves with all the infrastructure and equipments required for silkworm rearing on a large scale. Above all, the guaranteed purchase of cocoon at market price by the Department acted as a catalyte to take up sericulture.

The farmers here adopted the latest technology of paired row system

for establishing their mulberry gardens which not only provided feed for silkworm but also helped in intercropping of cabbage, cauliflower, chillies, coriander and flower (marigold) and provided additional income to the farmers. Now, farmers are in a win-win situation. In the first year, farmer can go for 3-4 rearings of 100 dfls, whereas, second year onwards every month one batch of 100 dfls can be reared from one acre well-established mulberry garden. In Vidarbha region, due to high temperature during summer and heavy down pour of rains in July, it becomes difficult to maintain the required humidity (up to 90%) during chawki rearing, and non-availability of mulberry leaf hinders silkworm rearing. Therefore, the farmers are advised to attempt only 6-7 crops a year. If it is a well-established mulberry plantation, then one could go up to 8-9 rearings, by following staggered leaf harvesting technique.

In last two years (2002 and 2003), three farmers have taken up rearing of an average of 150-200 dfls per crop and totally six crops were reared successfully producing 50-60 kg cocoons per 100 dfls (Table). The uninterrupted earnings to the tune of Rs.30000-40000 (average)/ha/yr has brought a sea change in the status of few farmers in these villages. It also generated additional employment to the small and medium farmer families who otherwise used to go to nearby towns in search of work.



*Silkworms with rearing stand*

**TABLE : ECONOMICS OF SERICULTURE IN VIDARBHA REGION**

| Parameters | Achievement |
|---|---|
| Average cocoons harvested/100 dfls (kg) | 55 |
| Net returns (Rs./100 dfls) | 3000 |
| BCR | 2.0 |
| Employment generated (mandays) | 110 |

### Trend setter

Thus, sericulture has changed the future of some of the farmers so much that today, they could afford luxurious household gadgets, which were rare to be seen in rural areas. It has brought the change, not only in the economic condition but also in the social status of these farmers. If the same enthusiasm is maintained, the days are not far away to see these villages in Vidarbha area as model for self-employment and sustained farming. And, sericulture will remain behind the achievement and the smiles of these farmers.

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## CSTRI REELING-CUM-TWISTING MACHINE FOR TASAR AND MUGA

the up and down movement of the ring rail. Six metallic rings of 2 inches diameter are fixed on the metallic ring-rail at intervals of 4 inches. The up and down motion of the ring-rail is achieved by a cam system. The jetteboute attachment is provided to each spindle for easy casting of filament and improve the quality of yarn. The jetteboute gets its drive through belt and pulleys from spindle driving pulley shaft worm and worm wheel. A stop motion clutch disengages and stops the jetteboute drive in the event of an end breakage.

The machine is suitable for reeling and twisting of Tasar and Muga cocoons. The output of the machine is around 250-300 of 55-60 denier tasar/reeling silk in 8 hours. The twist per inch can be varied from 3 to 13. Weaving trials have shown that Tasar / Muga silk yarn produced on the above machine with 8 to 9 T.P.I. are suitable as warp and do not require sizing material or any further twist. Yarns with 3 to 4 T.P.I. are found suitable for weft.

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