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NA Ganie
College of Temperate Sericulture, Sher-e Kashmir University of Agricultural Sciences and Technology of Kashmir, P. Box No. 674 G.P.O, Srinagar, Jammu and Kashmir, India

KA Dar
College of Temperate Sericulture, Sher-e Kashmir University of Agricultural Sciences and Technology of Kashmir, P. Box No. 674 G.P.O, Srinagar, Jammu and Kashmir, India

SZ Haque Rufaie
College of Temperate Sericulture, Sher-e Kashmir University of Agricultural Sciences and Technology of Kashmir, P. Box No. 674 G.P.O, Srinagar, Jammu and Kashmir, India

FI Qadri
College of Temperate Sericulture, Sher-e Kashmir University of Agricultural Sciences and Technology of Kashmir, P. Box No. 674 G.P.O, Srinagar, Jammu and Kashmir, India

MF Baqual
College of Temperate Sericulture, Sher-e Kashmir University of Agricultural Sciences and Technology of Kashmir, P. Box No. 674 G.P.O, Srinagar, Jammu and Kashmir, India

Afifa S Kamili
College of Temperate Sericulture, Sher-e Kashmir University of Agricultural Sciences and Technology of Kashmir, P. Box No. 674 G.P.O, Srinagar, Jammu and Kashmir, India

Corresponding Author:
NA Ganie
College of Temperate Sericulture, Sher-e Kashmir University of Agricultural Sciences and Technology of Kashmir, P. Box No. 674 G.P.O, Srinagar, Jammu and Kashmir, India

Impact of low cost rearing hut technology for upliftment of socio-economic status of sericulture farmers

NA Ganie, KA Dar, SZ Haque Rufaie, FI Qadri, MF Baqual and Afifa S Kamili

Abstract
Sericulturists in Kashmir are facing dearth of rearing space which is responsible for cocoon crop loss at the terminal stage of rearing. To address this issue an attempt was made to design and develop a rearing hut model from the locally available material which will enable the farmers to conduct silkworm rearing on scientific lines thereby helping them to harvest a good cocoon crop. A comparative study of hut rearing and the normal rearing revealed that all the economic parameters were decisively better in hut rearing with an average cocoon weight of more than 2 gms.

Keywords: Silkworm, rearing hut, space, farmer

Introduction
Sericulture plays an active and pivotal role in the economic development of J&K Union Territory. In spite of all odds it faced from time to time, this industry continues to be one of the important economic industries of the region to help the cocoon growers especially falling under poor category. With a view to boost this age old industry, the College of Temperate Sericulture Sher-e-Kashmir University of Agricultural Sciences and Technology of Kashmir is striving hard and playing its role.

The mulberry silkworm *Bombyx mori* L.is a delicate, highly domesticated and sensitive animal and cannot tolerate natural diurnal and seasonal fluctuations of the environment. Therefore these need to be reared in special rearing houses where environmental conditions could be maintained as per the requirement to ensure successful rearing and cocoon crop. In the Kashmir valley, silkworm rearing is performed only once in a year in the months of May-June. Despite the fact that a good number of rearers are willing to take up Sericulture/rearing of silkworms on a large scale, yet are not in a position to practice it because most of the farmers are poor having small holdings and living in very small dwellings. Since silkworm rearing is an indoor activity and requires at least 1000 sqft space for rearing one ounce (100 Dfl's of seed), farmers are not in a position to rear silkworms due to dearth of space. Most of the rearers use either a part of their dwellings or cow sheds as rearing rooms where human interference remains to a large extent and come in the way of maintaining hygienic conditions, thus making the worms susceptible to various types of silkworm diseases. Keeping all this in view, Division of Cocoon Crop Production COTS Mirgund took an initiative to address the problem of inadequate rearing accommodation of farmers by way of fabricating low cost rearing huts near the farmers dwellings. These huts were constructed at different locations from the locally available material involving very meager and affordable investment. The huts were constructed at various in places in district Baramulla viz:, Nihalpora, Deewar, Yakhmanpora, Chianabal, Huzzarpora, Rambail, etc.

The size of the hut is 15 ft x 12 ft x 8 ft having three tiers internally. Externally it is fitted with a door of 0.9 m x 1.8 m (3 ft x 6 ft) made of popular wood shutter with traditional latches. For more equitable distribution of heat within the hut, they were made more long than wide. The floor of the hut was smoothly plastered with mud and straw paste (kachcha floor). The skeleton of roof is made of medium sized logs of willow and popular trees covered with locally available paddy grass, typha grass etc so that optimum temperature could be easily maintained at optimum level.

For proper air circulation, the huts were covered with gunny cloth over which another cover of poly sheets was kept so that the temperature is maintained easily and could be easily rolled and lifted to lower down the temperature as and when required. Since it is not possible for the poor rearers to install thermostatically controlled air-heating or air-cooling devices, therefore, they were demonstrated the easy way to maintain temperature and humidity inside the huts by burning sigerres (fire pots) and by hanging wet gunny cloth on the doors respectively.

External view of Low Cost Rearing Hut

Internal view of Low Cost Rearing Hut

Comparative rearing performance under these huts is shown in the table below.

Shelf rearing in progress

Demonstration of rearing in Low Cost Rearing Hut

Harvesting of cocoons from locally available mountages

Mounting of larvae on pine shoot mountages

The silkworms were distributed to the farmers in the early morning hours. An average cocoon yield of 45 Kgs/ounce of silkworm seed was harvested with a promising cocoon wt. of 2 gms. The huts were also utilized for 2nd commercial rearing during July - August in the field. The striking feature of the hut model was that disease incidence was found to be minimum especially during summer as compared to the indoor rearing. The project gained a lot of popularity among the farmers owing to its cost effectiveness and better performance

Impact of Low cost Silkworm Rearing Hut Technology in the field (Data pooled over last three years)

Parameters	Chainabal		Huzzarpora		Rambail		Yakmanpora		Deewar		Nihalpora	
	Hut rearing	Indoor Rearing	Hut rearing	Indoor Rearing	Hut rearing	Indoor rearing	Hut rearing	Indoor rearing	Hut rearing	Indoor Rearing	Hut rearing	Indoor Rearing
Wt. of 10 matured Larvae	40.20	40.50	39.50	38.60	40.00	40.30	42.80	42.60	42.20	42.00	39.60	39.00
Av. Cocoon Wt.	2.10	1.90	1.80	1.79	1.92	1.90	1.91	1.90	2.00	1.90	1.88	1.84
Av. Shell. Wt	0.450	0.350	0.38	0.360	0.400	0.390	0.440	0.430	0.450	0.430	0.360	0.350
Av.SR %age	21.42	18.42	21.11	20.11	20.83	20.52	23.03	22.63	23.00	22.63	19.14	19.02
Qty. of seed reared (oz)	½	½	½	½	½	½	½	½	½	½	½	½
Weight of cocoon harvested in Kgs (Green)	24.50	20.00	23.50	21.200	23.50	22.800	26.500	24.900	22.05	21.800	20.50	18.100
Rate/ kg (green)	300	300	270	270	295	295	300	300	350	350	230	230
Income generated	7350	6000	6345	5724	6932	6726	7950	7345.5	7717	7630	4715	4163
Total Income/ ounce (in Rs.)	14700	12000	12690	11448	13864	13452	15900	14691	15435	15260	9430	8326

References

1. Ashoka J, Narayanswamy TK, Narayanswamy KC. Performance of multivoltine and bivoltine silkworm breeds, *Bombyx mori* L. for larval, cocoon, yield and silk filamenttraits. Journal of Applied Zoological Research 2012;23(1):51-58.
2. Giridhar K, Mahanya JC, Kantharaju BM, Nagesh S. Raw Silk Production. Indian Silk. 2010;8(1):27-29.
3. Kamili AS, Masoodi MA. Principles of Temperate Sericulture. Kalyani Publications, New Delhi, India; c2004. p. 122.
4. Kumar SN, Basavaraja HK, Reddy MN, Dandin SB. Effect of high temperature and high humidity on the quantitative traits of parents, foundation crosses, single and double hybrids of bivoltine silkworm, *Bombyx mori* L. International Journal of Industrial Entomology. 2003;6:197-202.