

Impact of Capacity Building and Training on Silkworm Rearers in Rajouri District of Jammu and Kashmir

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ABSTRACT

In the present years most of the developing countries giving more focus on training and skill development among their citizens. In that process a lot of public money is spending. But it is very unfortunate that very few projects having impact studies. Keeping in view of that different parameters were used for studying impact of five days capacity building and training (CBT) on silkworm rearers given by Research Extension Centre, Lamberi, Regional Sericultural Research Station, Miran Sahib, Central Silk Board, Jammu. It was found that after CBT training average seed intake, average production of green cocoons, average family income, average income from sericulture, average area under mulberry plantation, average number of mulberry plants, average number of disinfections, average number of Govt. schemes availed, average participation in extension communication programme (ECP), average green cocoon price per kg has been significantly increased by silkworm rearers and mortality of silkworm during silkworm rearing has also been significantly decreased.

Keywords: *Capacity Building and Training, Extension Communication Programme, Exposure visit Impact assessment and Parameters of silkworm rearing.*

District Rajouri is the prominent sericulture district of Jammu and Kashmir. This district having great scope of sericulture development and also having major role in upliftment of poor people's life through employment opportunities in the process of silkworm rearing to post cocoon production. Department of sericulture, Jammu and Kashmir with the financial and technical assistance of Central Silk Board doing great effort to promote sericulture in the district through various schemes. District Rajouri having total cocoon production 190 MT (2018-19) and 5930 ounce silkworm seed distribution and 7.25 lakh mulberry plantation and 36.36 hectare area covered under mulberry cultivation. Out of the entire schemes one scheme is giving five days capacity building and training to silkworm rearers. In that training experts of Central Silk Board are giving training to silkworm rearers covering all important aspects of silkworm rearing, such as techniques of mulberry plantation, pit making, fertilizer application, prepare disinfection solution, application of disinfection solution in rearing houses with spray pump, chawki rearing, late age rearing, disease management, hygiene management, application of moutages, harvesting of cocoons, techniques of sorting of cocoons and along with department of sericulture official one lecture is arranged for different Govt. schemes for silkworm rearers. Giving training to farmers is very important for their knowledge and skill development but along with that we must do the impact assessment of such type of

training then only we will know how the farmers have benefitted from such type of trainings and if any change is required on the basis of need of farmers we can make necessary modifications for more benefit of farmers (Singh and Kameswari, 2019). Hence, there is a need to study how capacity building and training had impacted the main target group i.e. silkworm rearers. Keeping all the things in mind the present study has been undertaken with a view to know the impact of Capacity Building and Training on farmers of Rajouri District of Jammu and Kashmir. A number of such approaches were analyzed for impact assessment of training on farmers in India which are: 1) In a study on Impact of Training on Knowledge and Adoption of Sericulturists in Kolar District of India found that the adoption of technology could be increased by motivation and conducting extension programmes such as Group discussion and Result demonstration. In addition study tours, refresher training programmes and confidence building steps would result in greater technology know how and adoption, this will have a positive spread effect in the study area (Srinivasa *et al.* 2013). 2) In a study on impact of Programme called "Knowledge Help Extension Technology Initiative" (KHETI) in Madhya Pradesh, India and found that those in the KHETI group had more awareness and knowledge of extension services compared to the control group. Before and after comparison of beneficiaries, indicated that they perceive KHETI as a useful, faster, and better quality tool than other services (Fu and Akter, 2012).

The present study was purposively conducted in Rajouri District of Jammu and Kashmir. Total 100 farmers were selected for the study. All farmers were selected for the study, which were selected for Capacity Building and Training (CBT) by Research Extension Centre, Lamberi Regional Sericultural Research Station, Miran Sahib, Central Silk Board in four separate batch 25 farmers in each batch. Data were collected for three years 2018, 2019 and 2020 for the study and analysis purpose. This study of impact assessment can be conceptualized as the difference between what is the situation before the CBT training and what is the situation after farmers got CBT training in terms of different parameters of silkworm rearing. For this study of impact assessment of CBT training different parameters of silkworm rearing was used. Before and after data was collected from the

concerned farmers with structured interview schedule along with data provided by Department of Sericulture, District Sericulture office, Rajouri, Jammu and Kashmir. In present study for analysis of the impact assessment of CBT training on respondents in the study area, before and after data was collected, scored, tabulated and analysed by using percentage and paired t-test.

Capacity Building and Training (CBT) is five days training programme designed and given by central silk board to silkworm rearers for advancement in their knowledge in silkworm rearing. An assessment of the impact was essential so as to determine whether CBT training meeting the objectives set forth initially. Impact of CBT training was studied in terms of different parameters related to silkworm rearing. Impact of CBT training on each of these parameters has been given below:

S. No.	Parameters for impact study (Average of three years, 2018-2020) (n=100)	Impact studies		t(cal)
		Before CBT	After CBT	
1	Seed intake (dfls)	85.00	110.00	7.05*
2	Production of green cocoons (kg)	28.30	35.46	8.21*
3	Family income (Rs.)	52870.00	69955.00	9.58*
4	Income from sericulture (Rs.)	12447.00	19237.00	8.82*
5	Mortality during silkworm rearing (%)	31.45	11.77	-14.59*
6	Area under mulberry plantation (in kanal)	0.43	0.54	4.42*
7	Number of mulberry plant (number)	32.15	61.12	3.57*
8	Applications of disinfections (number)	1.25	2.00	8.33*
9	Availing of Government schemes (number)	0.46	0.75	5.00*
10	Participation in ECP programme (number)	0.52	2.46	9.22*
11	Green cocoon price per kg (Rs.)	206.50	246.55	8.16*

(*Significant at 0.05 level)

Impact analysis of selected parameters

Seed intake

It was found that before CBT training average seed intake per farmer was 85 dfls and after CBT training it increased upto 110 dfls. It means after CBT training total seed intake increased by 29 % per farmer. Total seed intake increased because after CBT training farmers were getting more benefit from silkworm rearing. Paired t-test revealed that the t value of 8.95 was greater than the t critical value of 1.66 at 0.05 level of significance. Hence, it was concluded that there was significant increase in average seed intake by farmer after Capacity building and training.

Production of green cocoon

It was found that before CBT training average production of green cocoon per farmer was 28.30kg and after CBT training it increased upto 38.46 kg. It means after CBT training average production of green cocoon increased by 25 % per farmer. Average

production of green cocoon increased because after CBT training knowledge level of farmers for silkworm rearing is increased and per farmer seed intake also increased and mortality during silkworm rearing reduced. Paired t-test revealed that the t value of 8.21 was greater than the t critical value of 1.66 at 0.05 level of significance. Hence, it was concluded that there was significant increase in average production of green cocoon after Capacity building and training.

Family income

It was found that before CBT training average family income was Rs 52870 and after CBT training it increased upto Rs 59955. It means after CBT training average family income increased by 13 %. Average family income increased because after CBT training not only increased cocoon production but during the training programme one day exposure visit to agricultural institutes played a helping role for farmers to increase agricultural crop production and animal

husbandry. Paired t-test revealed that the t value of 9.58 was greater than the t critical value of 1.66 at 0.05 level of significance. Hence, it was concluded that there was significant increase in average family income after Capacity building and training.

Income from sericulture

It was found that before CBT training average income from sericulture was Rs 12447 and after CBT training it increased upto Rs 19237. It means after CBT training average income from sericulture increased by 54 %. Average income from sericulture increased because after CBT training along with cocoon production quality of cocoon also increased so the farmers getting more prices for their cocoon. Paired t-test revealed that the t value of 9.58 was greater than the t critical value of 1.66 at 0.05 level of significance. Hence, it was concluded that there was significant increase in average family income after Capacity building and training.

Mortality during silkworm rearing

It was found that before CBT training average mortality was 31.45 % and after CBT training it decreased upto 11.77 %. It means after CBT training average mortality in silkworm rearing decreased by 37 % per farmer. Average mortality during silkworm rearing decreased because after CBT training farmers knows how to overcome the disease and provide good quality leaves for reduction in mortality. Paired t-test revealed that the t value of -14.59 was greater than the t critical value of 1.66 at 0.05 level of significance. Hence, it was concluded that there was significant decrease in average mortality during silkworm rearing after Capacity building and training.

Area under mulberry plantation

It was found that before CBT training average area under mulberry plantation was 0.33 kanal and after CBT training it decreased upto 0.44 kanal. It means after CBT training average area under mulberry plantation increased by 33 % per farmer. Average area under mulberry plantation increased because in CBT training farmers learned how to prepare cuttings and make good quality sapling from cuttings. They also knows about how to make standard size pit and proper mixing of soil and FYM before plantation of sapling. Through all this method survivability of mulberry plant increased, this encouraged farmers to plant more mulberry plant for getting own good quality leaves. Paired t-test revealed that the t value of 4.42 was greater than the t critical value of 1.66 at 0.05 level of significance. Hence, it was concluded that there was significant increase in average area under mulberry

plantation at farmers level after Capacity building and training.

Number of mulberry plant

It was found that before CBT training average number of mulberry plant was 32.15 and after CBT training it increased upto 61.12. It means after CBT training average mortality in silkworm rearing increased by 91 % per farmer. Average number of mulberry plant increased because after CBT training farmers knows importance of mulberry plant and they also knows how to prepare sapling from cuttings and how to plant sapling and how to increase survivality of mulberry plant. Paired t-test revealed that the t value of 3.57 was greater than the t critical value of 1.66 at 0.05 level of significance. Hence, it was concluded that there was significant increase in average number of mulberry plant after Capacity building and training.

Applications of disinfections

It was found that before CBT training average number of disinfections was 1.25 and after CBT training it increased upto 2.0. It means after CBT training average number of disinfection increased upto 60 %. Earlier before CBT training farmers does not aware about benefit of disinfection especially after rearing. Most of the farmers are knows that before starting of rearing disinfection should be there but very few were knows that after competition of rearing disinfection is also important. So during the CBT training trainers given more focus to farmers for compulsory disinfection after competition of rearing. Paired t-test revealed that the t value of 8.33 was greater than the t critical value of 1.66 at 0.05 level of significance. Hence, it was concluded that there was significant increase in average number of disinfections after Capacity building and training.

Availing of Government Schemes

It was found that before CBT training average number of Government schemes availed by farmer was 0.46 and after CBT training it increased upto 0.75. It means after CBT training average number of Government schemes availed by farmers increased by 63 %. During CBT training trainers of Central Silk Board and Department of Sericulture, Rajouri, Jammu and Kashmir given detailed information about different government schemes started by central and state government. Many farmers who are having doubt about these schemes trainers given their contact number to farmers for helping to access these schemes. Paired t-test revealed that the t value of 5.11 was greater than the t critical value of 1.66 at 0.05 level of significance. Hence, it was concluded that there was significant increase in average number of

number of Government schemes availed by farmer after Capacity building and training.

Participation in Extension Communication programmes

It was found that before CBT training average participation in ECP programme by farmer was 0.52 and after CBT training it increased upto 2.46. It means after CBT training average participation in ECP programme by farmers increased by 373 %. During CBT training trainers of Central Silk Board and Department of Sericulture, Jammu and Kashmir told the farmers about importance of these ECP programmes and trainers also told to farmers why they must attend such type of programme especially during the silkworm rearing. In that time farmers also share their experience and if they are facing any problem during rearing experts will come to their nearby places and solve it immediately. Large gathering programmes such as awareness programme, filed day and farmers day where farmers can put their joint demand area wise such as market should be organize nearby places which can be solved it immediately by concerned departmental officers. Paired t-test revealed that the t value of 9.22 was greater than the t critical value of 1.66 at 0.05 level of significance. Hence, it was concluded that there was significant increase in average participation in ECP programme by farmer after Capacity building and training.

Green cocoon price per kg

It was found that before CBT training average green cocoon price per kg was 206.50 Rs. and after CBT training it increased upto 246.55 Rs. It means after CBT training average green cocoon price per kg increased by 19 %. During CBT training trainers of Central Silk Board and Department of Sericulture, Jammu and Kashmir told the farmers about proper application of mountages and if farmers don't have mountages then which local material is good for use of mountages and material must be in semidry condition. Farmers also knows about use of black cloth for drying of cocoons for improving of quality. That is the reason now farmers after getting CBT training now their cocoon price is increased. Paired t-test revealed that the t value of 8.16 was greater than the t critical value of 1.66 at 0.05 level of significance. Hence, it was concluded that there was significant increase in average green cocoon price per kg after Capacity building and training.

CONCLUSION

The study was conducted on the impact of capacity building and training on farmers of Rajouri District of Jammu and Kashmir. On the basis of findings, it was concluded that maximum number of respondents (85.00%) were male belonged to 44 to 57 years age group had education upto middle school level, were living in semi-pakka house and belonged to SC/ST categories. It was found that respondent's primary occupation was agriculture and secondary occupations was sericulture, were living in medium size, joint family and earned less than Rs 69955 annually. Maximum number of respondents had landholding of less than one acre. Majority of the farmers have single cocoon crop. It was found that there is significant increase in average seed intake, average production of green cocoons, average family income, average income from sericulture, average income from sericulture, average area under mulberry plantation, average number of mulberry plants, average number of disinfections, average number of disinfections, average number of Govt. schemes availed, average participation in extension communication programme (ECP), average green cocoon price per kg after capacity building and training and there is significantly decrease in mortality of silkworm during silkworm rearing after capacity building and training.

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