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Tasar Culture: Impact of Training on Knowledge Level of Different Types of Participants: A Case Study

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Abstract: ***The tasar culture is a forest based agro-industrial avocation and source of livelihood for tribal people living on the edge of the forest. Tropical tasar culture has special significance owing to its positional in providing self-employment and also in terms of its socio-cultural, socio-economic and ethnic importance. It provides gainful rural employment and remunerative income to a large tribal population. It is a way of life for tribal and inhabitants of forest areas. Tasar seed production, Rearing tasar silkworm and finally tasar silk reeling and spinning by these people provides them to earn for their livelihood 30% to 50%. Based on the different structured training programmes results has drawn it can be concluded that training has got a great impact on the development of skills and knowledge level of the participants an average min is 40% max is 95%. All the assessed participants are fully equipped and confident that they can practice Tasar Reeling and Spinning technology (wet, dry reeling and spinning) (40% to85% and 40% to 95%) and tasar Silkworm Rearing, Seed Production technology and disease management (40% to 95% and 35% to 90%) respectively on their own, which in turn will serve them as a self-employment. Through The tasar culture they can earn their livelihood and look after their family by increasing their monthly income through tasar culture Rs. 3000 to 5000/ month. On the other hand this will help in expanding the Tasar industry in Jharkhand in particular and India as a whole.***

Key words: Tasar culture, Silkworm rearing, Seed production, Tasar reeling & Spinning, impact of knowledge level.

1. Introduction

Sericulture is one of the major agro-industry that plays an important role in uplifting rural economy and provides employment opportunity for rural folk. Among *Vanya* or non mulberry silks, tasar culture is practiced by about 1.5 lakh tribal populace in the States of Jharkhand, Chhattisgarh, Orissa, Madhya Pradesh, Uttar Pradesh, West Bengal, Bihar, Maharashtra and Andhra Pradesh. Tasar culture involves continuous chain of several production activities. It starts with either collection of nature grown cocoons from forests or rearing of silkworm on its host plants in forests or raised by rearers which are utilized by reelers and weavers for production of yarn and fabrics. In the past, tasar culture was practiced as subsidiary occupation (Shetty *et. al.*, 2007) involving two to three months of family labour.

CTR & TI has spacious building to cater the need of research, training and administration. The research wing of the Institute has 14 disciplines to carry out R & D works on Tasar host plant and silk worm. The Institute laboratory is well equipped with state of the art equipment. The Institute has its own farm of about 60 acres covered with Tasar food plants, facilities for silkworm rearing, auditorium, training hall and hostels. It also has a full-fledged Post cocoon Technology (PCT) section for taking up silk reeling, dyeing and weaving related research and technology development work. (Annual Report 2007-08, 2008-09).

Training Division of the Institutes has the following prime objectives:-

- To generate human resource by providing training through Post-Graduate Diploma and many short-term certificate and Ad-hoc courses in Tasar culture.
- To strengthen the institutional capabilities through continuing education and training programmes, and updating the techno-managerial skills of staff associated with Tasar industry.
- To design and implement the need-based formal and informal human resource training and development programme.
- To provide hands-on-practice training to farmers and unemployed youths for helping them to become successful Tasar culture entrepreneurs.

All the mentioned training programme falls under the programmes called Human Resource Development, which is one of the main components of Central Silk Board (CSB).Human Resource Development (HRD) can be defined as "the framework for helping employees develop their personal and organizational skills, knowledge and abilities" by Susan M. Heath field. HRD included such opportunities as employers training, employee career development, performance management and development, coaching, monitoring, succession planning, key employee identification, tuition assistance and organization development. The focus of all aspects of Human Resource Development is on developing the most superior workforce so that the organization and individual employees can accomplish their work goals in service to customers (Ronald R. Sims 2006).Coming to sericulture which is a skilled-

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based industry trained man power is the backbone of it. This can be accomplished only through Human resource development in general and training programme in particular. Proper training programmes can lead to the improvement of silk production in the country as a whole.

2. Objectives

- To analyze the level of improvement in different skills of the participants.
- To assess the outcome of the training programmes.
- To find out the importance of training programmes.
- To study the mindset of the participants after the training programmes.

3. Materials and Methods

The present investigation was carried out at CTR&TI, Ranchi and evaluation of different training programmes at the Institute. The assessment was made through personal interaction with those participants and this can be done by a method called, "questionnaire method or personal interaction method". This method is based on two steps i.e. preparing questionnaire and asking questions to the participants individually.

Therefore, based on the above cited method the first step of this case study was initially prepared questionnaire. Since, different training programmes are conducted in the Institute, the questionnaire prepared was based on the training programme attended by the participants. In the present study two different programmes have been assessed i.e. reeling /spinning technology and the Rearing and seed production Technology in tasar culture.

The second step is involves asking the prepared questions to all the participants or the members are selected randomly among them, so that a clear-cut idea about the knowledge level and mind-set of the participants can be drawn. In this present the training programmes that had been assessed two batches from the post cocoon reeling and spinning technology and two batches from the tasar seed production and rearing technology.

Further in order to get the main impact of the training programme on the development of skills of the participants a two tier interview had been made to each batch (ASCI, 2007). This was done by preparing two types of questionnaires for each programme viz. Pre-training questionnaire and post-training questionnaire. The pre-training questionnaire was asked before the training programme and the post-training questionnaire was asked after the completion of the programmes and then accordingly the assessment had been made.

The drawn data were analyzed in percentage form, where number of participants learned after training was divided by total number of participant assessed in to hundred to get the impact knowledge level (in percentage %) was calculated using the following formula (Srinivasa *et al.*, 2007and Scott B. Parry2005).

$$\text{Impact of knowledge level (\%)} = \frac{\text{Learned Post-training}}{\text{Total No. of Trainees assessed}} \times 100$$

4. Results

According to the interview that had been conducted the result was formulated and presented in the following tables The case study results drawn from the participants of each batch were presented in the following tables. For each batch different table was formulated so as to assess them accordingly. Since, four batches had been assessed, therefore, four tables were formulated and comments were given accordingly.

Table 1: Methods Learned by the Participants from the Training Programme Post Cocoon Silk Reeling / Spinning Technology (PCT)
No. of Participants attended: 14
No. of Participants assessed: 14

S. No.	*Methods*		*No. of Participants*		*Impact of knowledge level (%)*
			Known pre-training	*Learned post training*	
1.	Sorting and grading of cocoons		6	8	57.1
2.	Drying	Sun drying	6	8	57.1
		Hot air drying	0	14	100.0
3.	Cooking	Traditional method	7	7	50.0
		Cooking with H_2O_2	0	14	100.0
4.	Chemical used in cooking	Washing soda	5	9	64.2
		H_2O_2	0	14	100.0
5.	Reeling		5	9	64.2
6.	Re-Reeling		4	10	71.4
7.	Spinning		8	6	42.8

Comments:
Though some participants have been practicing post cocoon technology at their centers, some of them were new to this technology. Even among those participants who had practiced reeling before, some of the technologies were new. Therefore this training has got a positive impact on their skills development and knowledge level.

Table 2: Methods Learned by the Participants from the Training Programme Post Cocoon Silk Reeling / Spinning Technology (PCT).
No. of Participants attended: 14,
No. of Participants assessed: 14

S. No	*Methods*		*No. of Participants*		*Impact of knowledge level (%)*
			Known pre-training	*Learned post training*	
1.	Sorting and grading of cocoons		6	8	57.1
2.	Drying	Sun drying	4	10	71.4
		Hot air drying	0	14	100.0
3.	Cooking	Traditional method	6	8	57.1
		Cooking with H_2O_2	0	14	100.0
4.	Chemical used in	Washing soda	8	6	42.8
		H_2O_2	0	14	100.0
5.	Reeling		4	10	71.4
6.	Re-Reeling		2	12	85.7
7.	Spinning		7	7	50.0

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Comments:
Almost all the participants are new to post cocoon technology. Though some of them have learned before, it was confined only to the spinning process. Therefore, this training has got a great impact on their knowledge level and skills development.

Table 3: Methods Learned by the Participants from the Training Pgogrramme Rearing & Seed Technology in Tasar Culture
No. of Participants attended : 17
No. of Participants assessed : 17

S. No.	*Methods*	*No. of Participants*		*Impact of knowledge level (%)*
		Known pre-training	*Learned post training*	
1.	Selection of Rearing sites	6	11	64.7
2	Height of the plant use for rearing	4	13	76.4
3	Nursery Technique	0	17	100.0
4	Application of Manure	2	15	88.2
5	Application of fertilizers	3	14	82.3
6	Types of Manure	2	15	88.2
7	Types of fertilizers	2	15	88.2
8	Pruning Methods	3	14	82.3
9	Chawki garden maintenance	0	17	100.0
10	Silkworm eco-races	4	13	76.4
11	Brushing	5	12	70.5
12	Awareness about diseases	4	13	76.4
13	Use of LSM (Tasar Rakshak)	0	17	100.0
14	Disposal of diseased worms	2	15	88.2
15	Method of worm transfer	4	13	76.4
16	Care during molting	4	13	76.4
17	Foliage to be left for spinning	0	17	100.0
18	Care during spinning	3	14	82.3
19	Checking of crawling down of worms	2	15	88.2
20	Maintenance of seeds	0	17	100.0
21	Protection from ants	5	12	70.5
22	Harvesting of cocoons	5	12	70.5
23	Grading of cocoons	6	11	64.7
24	Transportation of cocoons	7	10	58.8

Comments:

Almost all the participants are new to Tasar culture; hence this training has got a hundred percent impact. And through this training they are equipped and are confident to perform rearing on their own field.

Table 4: Methods Learned by the Participants from the Training Pgogrramme Rearing & Seed Technology in Tasar Culture
No. of Participants attended : 30
No. of Participants assessed : 30

Sl. No.	Methods	*No. of Participants*		*Impact of knowledge level (%)*
		Known pre-training	*Learned post training*	
1.	Selection of Rearing sites	5	21	70.0
2	Height of the plant use for rearing	8	22	73.3
3	Nursery Technique	0	30	100.0
4	Application of Manure	5	25	83.3
5	Application of fertilizers	5	25	83.3
6	Types of Manure	6	24	80.0
7	Types of fertilizers	6	24	80.0
8	Prunning Methods	4	26	86.1
9	Chawki garden maintenance	0	30	100.0
10	Silkworm ecoraces	6	24	80.0
11	Bushing	10	20	66.6
12	Awareness about diseases	6	24	80.0
13	Use of LSM (Tasar Rakshak)	0	30	100.0
14	Disposal of diseased worms	3	27	90.0
15	Method of worm transfer	5	25	83.3
16	Care during moulting	4	26	86.6
17	Foliage to be left for spinning	0	30	100.0
18	Care during spinning	4	26	86.6
19	Checking of crawling down of worms	0	30	100.0
20	Maintenance of seeds	2	28	93.3
21	Protection from ants	4	26	86.6
22	Harvesting of cocoons	8	22	73.3
23	Grading of cocoons	4	26	86.6
24	Transportation of cocoons	2	28	93.3

Comments:
Almost all the participants are new to Tasar culture; hence this training has got a hundred percent impact. And through this training they are equipped and are confident to perform rearing on their own.

5. Discussion

This case study has been done in order to study the impact of training programme held in the institute. This Institute conducts different training programmes for farmers, reelers, weavers, officers, etc. Most of these participants are sponsored by the Central Govt. or State Govt. Training Division of the institute played a vital role on this issue and also involves other divisions of the Institute had played their own secondary role in order to make these training programmes successful. The training programmes on which the study was made are Post Cocoon/Reeling technology which is mainly for women and Rearing and seed production technology which is mainly for male participants. The participants of all these programmes belong to the tribal families of the state in which most of them work for their daily bread. The annual income of these families ranges from Rs. 15,000 –Rs. 40,000 which is far less than the middle men. These people practice both agriculture and sericulture in order to fulfill their livelihood.

As we know Sericulture is skill-based, in order to earn more or boost out the product and income, special training is much needed for these group of people. And these trainings are conducted in this Institute and other training centres of the State. So, these Institutes and centers have got a major role to enhance the standard of living of these tribals people who are the Tasar culture practitioners in the State. And also one more constraint faced by these groups of people is that most of them are not literates, some of them belong to the intermediate level while others are under-matric and some of them are illiterate. Therefore, these kinds of Training

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Programmes are very much useful for their knowledge and skill development through which they can practice in the field and at home or in any Common Facilities Centers (CFCs). This type of Training programmes give lot of knowledge and help them to develop their skill in their particular field. And through all these knowledge and skill they can now go and perform better in their own particular area (Scott B parry. 2005, Donald L. Kirkpatrick and James D. Kirkpatrick. 2006, 2007).

In the present study the selected participants showed their willingness towards the programmes and also to Tasar Culture. Through this study it can be clearly observed and analyzed that training programme has uplifted their knowledge level and skills to some extent. Some of them, who are already practicing sericulture, have gained more skills and knowledge from these programmes which has made them masters in their field. And for those who are totally new to Tasar Culture, it had been an opportunity for them to realize another path in their life through which they can earn their living through Tasar Culture which is quite comfortable and scope-full. These participants though they are new to tasar culture, they shows their interest in learning and their keenness to practice this culture in their own.

Therefore, last but not the least in order to improve the living standard of the tribal Tasar growers and women, more such training programmes may be conducted in more centers so as to reach every nook and corner of the State which will ensure better transfer of technologies to all the Tasar growers of the State.

6. Conclusion

In the present case study total 75 participants in four batches (two from Reeling /Spinning and two from Rearing/seed production technology) were assessed for their knowledge level on different aspect of silkworm seed production, silkworm rearing and reeling and spinning technologies. Based on the result drawn it can be concluded that these training programmes has got a great impact on the development of their skills and knowledge level of all the training participants. All the assessed participants are now fully operational and positive that they can practice seed production, rearing and reeling technologies on their own, which in turn will serve them as a self-employment. And through this they can earn their livelihood and look after their family by increasing their annual income through Tasar culture. On the other hand, this will help in expanding the Tasar industry in Jharkhand and other tasar growing states in India as a whole. Ultimately, this will help the Institute in achieving one of its prime objective i.e. Human Resource Developments (HRD) which is the need of the hour in Tasar culture.

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Figure: Assessment of participants in different training programmes

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