

Training Programmes of ISDS on Reeling and Spinning Technology in Tasar Culture for Woman Participants

Dr. P. M. Muniswamy Reddy¹, Dr. V. P. Gupta²

¹Scientist-B, Central Tasar Research and Training Institute Piska-Nagri, Ranchi - 835 303, Jharkhand, India

²Scientist-D, Central Tasar Research and Training Institute Piska-Nagri, Ranchi - 835 303, Jharkhand, India

Abstract: *Human resource development and training programmes are the key factors in enhancing productivity and quality in various sectors by improving fitness and skill power of their stakeholders. Keeping this in view, Central Tasar Research and Training Institute (CTR&TI), Ranchi has taken up the task of designing and organizing various ample training programmes silk reeling and spinning for effective human resource development and training in tasar culture. The training programmes of Integrated Skill development Scheme (ISDS) To assess the quality, effectiveness and impact of training programmes, a systematic analysis was made on the basis of various parameters like reeling and spinning of tasar yarn such as the extent of facilities provided, training efficiency, overall management and coordination of the training programme and other indices calculated based on pre- and post-training data collected from the trainees. The results However, they opined for some improvement in performance to make their practically operated their independent more interesting and effective by using newly developed reeling and spinning machines. The data revealed that higher level of improvement in technology adaptation; knowledge level and income level of all the trainees, ranging from (Table-4) 55.4, 55.2&53.2%, and approximate Rs. 4,500 to 5,000per month respectively. The training programmes of Integrated Skill development Scheme (ISDS) improvement of tasar silk reeling & spinning technology of all three batches women beneficiaries to increase ranging from (Table-5) 28.34, 31.16 &28.51 % respectively. The improvement of silk yield is higher in case of wet reeling (Table-1, 2 &3) 159, 95.2 &97.6%respectively followed by dry reeling 121,85.7 & 85.7%whereas it was lowest in case of Ghicha and Katia spinning (45.5,53.4&38.6 %) & (42.4,45.4& 58.1%) respectively.*

Keywords: Tasar culture, reeling & spinning, Wet reeling, Dry reeling, Ghicha & Katia

1. Introduction

Indian Tasar Culture has a long heritage and is inseparably interwoven with traditional livelihood of the aborigines of Jharkhand, Bihar, Chhattisgarh, Orissa, Andhra Pradesh, Maharashtra, West Bengal and Uttar Pradesh. The tasar industry by its nature is a cluster of many non-farm and on-farm activities and has a strong need for many forward and backward linkages. It has been contributing towards the socio-economic upliftment of rural poor, especially from among the tribes, who otherwise occupy the status of people Below Poverty Line. Because of its potential in harbouring gainful rural employment, tasar culture is an effective tool for raising tribal economy and promoting cottage industry. It is a backbone for tribal development, and the Government of India, through the Central Silk Board and different State Governments have initiated several developmental and welfare measures for the tribal welfare through tasar culture. It is a way of life for various tribes and forest dwellers. About 1.25 lakh tribal families are associated with tasar culture in the country. In recent years, the tasar industry has acquired a big role in improving socio-economic status of these tribal people and generating employment opportunities.

Human resource is one of the most critical resources which can give competitive advantage to the organization. In fact, the performance of an enterprise to a great extent depends on the techno-managerial skills possessed by its people. In order to achieve commercial excellence, organizations have been making greater investment in human resource training

and development. Systematic and well-planned training and development endeavour helps the organization in overcoming techno-managerial obsolescence and in acquisition of new ideas, skills and techniques. In this context, it is vital that the entire training and development effort is geared towards aligning with the corporate and business strategies of an organization. However, many organizations are experiencing difficulties in planning, organizing and conducting effective training and development programmes, in choosing appropriate human resource development strategies and in developing effective trainers.

To meet the growing needs and expectation of Tasar Industry. Training division of CTR & TI runs various Human Resource Training Programmes for the Scientists, officer and technical/field staff of Central Silk Board (CSB) and Dept. of Sericulture (DOS) from different Tasar growing states, and also farmers, silk reelers, unemployed youth, NGOs and other stake holders of Tasar industry. These programmes are conducted by well-experienced, qualified, trained and able scientists of CTR & TI. Most of the programmes are fully sponsored by either CSB or funding agencies and the participants are provided free boarding & lodging and travelling facilities.

Training Division of Institute ISDS has one the prime objective:-

“Skill Seeding and Upgradation of skills in Sericulture sector to meet the dynamic needs of the industry and increasing employability, income levels and quality of

life". Institute Integrated Skill development Scheme (ISDS) Ministry of Textile, Govt. of India.

2. Tasar Silk Reeling and Spinning Technology

All the mentioned training programmes falls under the sector called 'Human Resource Development', which is one of the main sectors of Central Silk Board (CSB), a statutory body deals with the production of silk in India.

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-based industries, trained man power is the backbone of it. This can be accomplishing only through Human resource development in general and training programme in particular. Through training programme trained man power can be boost out in sericulture which finally leads to the development of silk production in the country as a whole.

3. Materials and Methods

The present investigation was carried out at CTR&TI, Ranchi and evaluation of training programmes was conducted with various target groups who participated in different training programmes at the Institute Integrated Skill development Scheme (ISDS) during the period on June

2012 to November 2013, three batches total 75 participants and each batch training programme duration 30 days. To assess the technology adaptation, knowledge level quality, effectiveness and impact of training programmes, the data were collected with the help of a structured questionnaire and personal interview of the participants before the commencement and completion of the training programmes. In case of woman trainees the data were collected through practically running 8hours working in a groups of the participants first day of the training and before one day compilation of training programme conducted test for practically and collect production of different machines used in the present course of the training programme of tasar reeling and spinning technologies before commencement & after completion of training were also collected from (groups each group 5-6 members per batch 25) the participants with pre-training and post-test training status of technology adoption. The impact of training on knowledge of the participants was also made for the training programmes, especially organized for the women's (Sunildutt, J. and Chole, R.R., 2002;Rahmathulla, *et al.*, 2003; Rahmatulla, *et al.*, 2006; Srinivasa *et al.*, 2007).

The assessment of different parameters were calculated as per cent scores obtained from the data collected from trainee respondents at the end of training programmes. Improvement in knowledge and adoption level of tasar technologies was calculated using the following standard formula (Srinivasa *et al.*, 2007and Scott B. Parry.2005.).

$$\text{Percentage of Improvement} = \frac{\text{Post-training test} - \text{Pre-training test}}{\text{Pre-training test}} \times 100$$

The data were analysis for the assessment of effectiveness and impact of training programmes on the basis of increase in various indices and levels of knowledge and technology adoption (Ansari and Chandargi, D.M. (2000).

4. Results and Discussion

This Institute conducts Integrated Skill development Scheme (ISDS) training programme for women participants. Most of these are sponsored by the Central government. (Ministry of Textiles, Govt. of India)The Institute had played their own subordinate role in order to make these training program a successful one. The training course on which the study was made are Post Cocoon/Reeling & Spinning Technology which is mainly for women participants of all these programs 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. 4,500 –Rs. 5,000 which is far less than the middle men. These people practice both agriculture and sericulture in order to fulfill their livelihood (Subramaniam, R.K. *et al* 1995).

As we know Sericulture is a skill-based, in order to earn more or boost out the product and income, special training is much needed for these group of people. These training had been conducted in this Institute and other training centre of the State, so as to enhance the living standard of these tribal people.

The major constraints faced by these groups of people is that most of them are not literates and some of them belong to the intermediate level while others are under metric and some of them are illiterate. Therefore, these kinds of tasar Reeling & Spinning Training Program are very much useful for their knowledge and skill development through which they can practice at their field and at home or at any common facilities centers (CFCs). These Training program gives a lot of knowledge and help them to develop their skill in their particular field. Through all these knowledge and skill they can now go and perform better in their own particular area. (Scott B parry, 2005, Donald L. Kirtpatrick and James D. Kirtpatrick. 2006, 2007, Kumar, N. Sudeep, K. and Subramanian, R. 1994).

In the present tasar Reeling & Spinning technology the selected participants shows 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 been practicing sericulture, have gained more skills and knowledge from these programs which has make them master in their field. The participants who are totally new to Tasar Culture had been an opportunity 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 this culture, they shows

their interest in learning and their eagerness to practice this tasar culture in their own. Therefore, at last but not the least, in order to improve the living standard of the tribal tasar growers and women, more and more such training programmes has to be conducted in more centers so as to reach every nook and corner of the State. Recent and new

technology can also be tried and transfer to the farmers through these programmes. These, type training programmes can be frequently conducted from time to time and demonstrate practically in the field so as to gain more impact.

Table 1: Tasar Silk Reeling & Spinning Technology (June 13 - July 07, 2012) CTR&TI, Ranchi

Sl No.	Trainee_Name	GROUP No.	Pre-Training Production/day (8 hrs)	Post-Training Production/day (8 hrs)	Improvement (%)	Grade awarded
1.	Mrs Chumani Kispotta	A (Ghicha yarn)	154	224	45.5	A
2.	Ms Pooja Tirkey					A
3.	Mrs Mamta Tirkey					A
4.	Mrs Sumitra Tigga					A
5.	Poonam Tirkey					A
6.	Mrs Gunjair Oraon	B (Katia Yarn)	170	242	42.4	A
7.	Mrs Ruby Oraon					A
8.	Mrs Sweta Tirkey					A
9.	Mrs Sarita Gari					A
10.	Mrs Gita Bhagat					A
11.	Ms Saraswati Gari	C (Reeled Yarn on Pedal/Motorized Reeling-cum-Twisting machine)	80	128	60.0	A
12.	Mrs Sarita Tirkey					A
13.	Mrs Margret Minj					A
14.	Mrs Suman Kujur					A
15.	Mrs Bandhni Kujur					A
16.	Mrs Rita Khalkho	D (Wet Reeling Machine)	78	202	159.0	A
17.	Mrs Jamuna Devi					A
18.	Mrs Sangita Tirkey					A
19.	Ms Rashmi Toppo					A
20.	Mrs Soni Toppo					A
21.	Mrs Shivan Orawn	E (Dry Reeling-cum-Twisting Machine - Samridhi)	64.5	143	121.7	A
22.	Ms Diraj Kumari Tirkey					A
23.	Mrs Gita Tirky					A
24.	Mrs Rashmi Tirky					A
25.	Sohari Kachhap					A

Table 2: Tasar Silk Reeling & Spinning Technology (August 21 - September 14, 2012) CTR&TI, Ranchi

Sl No.	Trainee_Name	GROUP No.	Pre-Training Production/day (8 hrs)	Post-Training Production/day (8 hrs)	Improvement (%)	Grade awarded
1.	Mrs Rehati Naik	A (Ghicha yarn)	234	359	53.4	A
2.	Ms Srabani Mahali					A
3.	Ms Sanju Naik					A
4.	Ms Debaki Naik					A
5.	Mrs Jyoshana Mukhi					A
6.	Mrs Muna Naik	B (Katia Yarn)	293	426	45.4	A
7.	Mrs Parbati Naik					A
8.	Mrs Kaikei Naik					A
9.	Mrs Banalata Naik					A
10.	Mrs Tapaswini Naik					A
11.	Ms Pupalata Patra	C (Reeled Yarn on Pedal/Motorized Reeling-cum-Twisting machine)	80	130	62.5	A
12.	Ms Anjana Patra					A
13.	Ms Sonu Naik					A
14.	Ms Kausalaya Naik					A
15.	Mrs Sulochana Naik					A
16.	Ms Sanjita Naik	D (Wet Reeling Machine)	124	242	95.2	A
17.	Ms Sagarika Sahoo					A
18.	Ms Rashmi Rekha Das					A
19.	Ms Kanchani Singh					A
20.	Ms Banita Giri					A
21.	Mrs Sabita Naik	E (Dry Reeling-cum-Twisting Machine - Samridhi)	133	247	85.7	A
22.	Ms Tanushiree Mukhi					A
23.	Ms Purnima Mukhi					A
24.	Mrs Manjulata Naik					A
25.	Mrs Golap Mishra					A

Table 3: Tasar Silk Reeling & Spinning Technology
(October 21 –November19, 2013) CTR&TI, Ranchi

Sl No.	Trainee_Name	GROUP No.	Pre-Training Production/day (8 hrs)	Post-Training Production/day (8 hrs)	Improvement (%)	Grade awarded
1.	Lakshami Devi	A (Ghicha Yarn)	264	366	38.6	A
2.	Saraswati Orain					A
3.	Budhani Orain					A
4.	Bishun Devi					A
5.	Preeti Orain					A
6.	Kanchhi Orain	B (Katia Yarn)	136	215	58.1	A
7.	Anjali Tigga					A
8.	Sarita Orain					A
9.	Katrina Orain					A
10.	Rameeya Kumari					A
11.	Seema Dhan	C (Reeled Yarn on Pedal/Motorized Reeling- cum-Twisting machine)	72	168	133.3	A
12.	Sushma Devi					A
13.	Daso Orain					A
14.	Preeti Devi					A
15.	Bachchhi Devi					A
16.	Lalita Devi	D (Wet Reeling Machine)	82	162	97.6	A
17.	Devagi Orain					A
18.	Arti Orain					A
19.	Deepan Orain					A
20.	Jhariyo Orain					A
21.	Sushma Orain	E (Dry Reeling-cum-Twisting Machine - Samridhi)	82	247	85.7	A
22.	Jauni Devi					A
23.	Ledi Orain					A
24.	Siban Orain					A
25.	Sunita Devi					A

5. Comments

Here some of the participants are practicing spinning and silk reeling technology at their villages at Common facility centres (CFC) but some of them are new to Tasar silk reeling and spinning technology. Most of them do not have practical knowledge about the activities of post cocoon technology before the training programme but after the training programme it was observed that they have learned the skills and knowledge of silk reeling and spinning practically handled newly developed Dry Reeled Yarn on Pedal/Motorized Reeling-cum-Twisting machine, Reeling-cum-Twisting Machine Samridhi, Ghicha and Katia etc., (CTR&TI Ranchi) all machines operated their own skills and it improves the quality and quantity of Tasar silk production . Therefore this integrated skill development scheme (ISDS) training programme has got a positive impact on their skills and knowledge level by practicing practically they can earn their livelihood and look after their family by increasing their annual income through Tasar culture Table 1,2&3.

Table 4: Impact of Tasar Silk Reeling & Spinning Technology on Knowledge level

Batch No.	Training Period	Technology Knowledge Level			
		No. of participants/ Batch	Pre-training (%)	Post-training (%)	Improvement (%)
1.	June 13 - July 07, 2012	25	56.9	88.4	55.4
2.	August 21 - September 14, 2012	25	58.4	90.1	55.2
3.	October 21 - November19, 2013	25	58.6	89.8	53.2

Table 5: Impact of Tasar Silk Reeling and Spinning Technology on Adoption Level

Batch No.	Training Period	Technology Knowledge Level			
		No. of participants/ Batch	Pre-training (%)	Post-training (%)	Improvement (%)
1.	June 13 - July 07, 2012	25	43.4	55.7	28.34
2.	August 21 - September 14, 2012	25	43.0	56.4	31.16
3.	October 21- November19, 2013	25	44.2	56.8	28.51

6. Conclusion

Central Tasar Research and Training Institute (CTR&TI), Ranchi has taken up the task of designing and organizing various ample training programmes tasar silk reeling and spinning for effective human resource development and training in tasar culture. The training programmes of Integrated Skill development Scheme (ISDS) To assess the quality, effectiveness, impact and grading of individual trainees beneficiaries of the training programmes, a systematic analysis was made on the basis of various parameters like reeling and spinning of tasar yarn such as the extent of facilities provided, training efficiency, overall management and coordination of the training programme and other indices calculated based on pre- and post-training data collected from the trainees. The results However, they opined for some improvement in performance to make their practically operated their independent more interesting and effective by using newly developed reeling and spinning machines.

This in turn will serve them as a self-employment. By doing so, they can earn their livelihood and look after their family by increasing their annual income (approximately Rs. 4,500 to 5,000per month) through Tasar culture. On the other hand, this will help in expanding the Tasar industry in Jharkhand in particular and other tasar growing states in India as a whole. Ultimately, this will help the Institute in achieving one of its objective i.e. Human Resource Developments (HRD) which is the need of the hour in Tasar culture.

References

- [1] Ansari and Chandargi, D.M. (2000). Effectiveness of induction training programme organized for Assistant Agriculture Officers (Farm women). *J. Extn. Edu.*,**11**: 2645-2650.
- [2] Srinivasa, G.; Rahmathulla, V.K.; Vindhya, G.S. and Rajan, R.K. (2007) Training programmes in sericulture: Their evaluation and impact on extension personnel and sericulturists. *Indian J. Seric.*, **46**(1): 26-31.
- [3] Donald L. Kirkpatrick and James D. Kirkpatrick. (2006).Evaluating Training Programmes. Text book Fourth level (3rd edition).
- [4] Donald L. Kirkpatrick. (2007). Evaluating Training Programmes (Vol.-1). (Easy to read large 3rd edition).). *PP*: 153
- [5] Kumar, N.; Sudeep, K. and Subramanian, R. (1994) Training effectiveness, an analysis of dairy trainees. *J. Extn. Education*, **5**(4): 985-991.
- [6] Scott B. Parry (2005) Evaluating the Impact of Training: A collection of Tools & Techniques.
- [7] Subramaniam, R.K., Sarkar, G., Singhvi, N.R., Chikkanna, Kalappa, H.K., Iyengar, M.N.S. and Datta, R.K. (1995). Socio-economic conditions of women sericulturists and their access to sericulture technology. *Indin J. Seric.* **34** (1): 50-53.
- [8] Rahmatulla, V.K., Srinivasa, G., Vindhya, G.S. and Rajan, R.K. (2006). Assessment of sericultural

technology training programme – An analysis of sericulture trainees. *Indin J. Seric.* **45** (1): 7-10.

- [9] Rahmatulla, V.K., Srinivasa, G., Vindhya, G.S., Rajan, R.K. and Kamble, C.K. (2007). Faculty performance and course coverage in sericulture training programme – An analysis. *Indin J. Seric.* **46** (2): 136-139.
- [10] Sunildutt, J. and Chole, R.R. (2002). A study on adoption of sericultural practices by sericulturists. *Indin J. Seric.* **41** (1): 1-5.



Tasar Cocoons Sorting of Cocoons





Ghicha yarn Katia yarn



Wet reeling: Reeling on MRTM

Figure 1: Processing of Tasar Reeling and spinning technologies