

To Study the Evaluation of Training Programmes in Tasar Culture at CTR & TI Ranchi

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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 for effective human resource development and training in tasar culture. During 2010-11 and 2011-12, a number of training programmes were organized at CTR&TI and a total 87 and 98 batches 1801 and 1626 beneficiaries respectively were imparted training on various aspects of tasar culture. The training programmes included Structured Course i.e., Post-Graduate Diploma in Sericulture - PGDS (NM) for graduates and various short-term Certificate Courses for extension officials and farmers. To assess the quality, effectiveness and impact of training programmes, a systematic analysis was made on the basis of various parameters such as the extent of facilities provided, training efficiency, overall management and coordination of the programme and other indices calculated based on pre- and post-training data collected from the trainees. The results indicated that the trainees of PGDS (NM) course had very good opinion about course content, evaluation system, course coordination and duration. However, they opined for some improvement in faculty performance to make their teaching more interesting and effective by using modern audio-visual aids. The data revealed that higher level of improvement in knowledge level of all the trainee groups, ranging from 55.4 to 99.4 during 2010-11 and 56.7 to 91.6% during 2011-12. The improvement in knowledge level in tasar culture technology led to increase the rate of technology adoption by the farmers. The technology adoption rate was higher in case of tasar silkworm seed production (56.4 - 51.7%) followed by silkworm rearing (25.4 - 25.1%); whereas it was lowest in case of tasar host plant maintenance (19.6-25.3%).

Keywords: PGDS (NM), Tasar culture, evaluation, impact of knowledge level.

1. Introduction

Among many agro-based cottage industries in India, sericulture provides income and employment generating opportunities to rural poor and tribals. 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.

Human resource is one of the most critical components for the growth of an Industry. 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 scientists of CRT & TI. Most of the programmes are fully sponsored by either CSB or funding agencies and the participants are provided free boarding, lodging and travel facilities.

To generate a steady stream of competent professionals for meeting out the manpower requirement of tasar industry at various levels, CTR&TI runs a structured course i.e., Post-graduate Diploma in Sericulture (Non-mulberry) for

graduates. This is a 15-month duration course which consists of two semesters, each of 6-month duration, and an Intensive Practical Training of 3-month duration as Rural Work Experience Programme. On the basis of need assessment of tasar industry in general and technological requirement in specific/gap area in particular, exclusive training programmes have been designed to provide hands-on-training to the farmers to improve their technical knowledge and operational skill in various state-of-the art technologies and techniques of tasar culture for higher cocoon productivity and silk quality. To hasten the diffusion of technologies in the field, it is imperative that the extension staff should possess good knowledge pertaining to recommended technologies (Ronald R. Sims 2006). Keeping this in view, the training programmes have been formulated to impart training to extension officials for improvement of their knowledge about various tasar culture technologies and other related aspects. The present study was taken up to evaluate training programmes organized during 2010-11 and 2011-12 at CTR&TI and assess their impact on knowledge level of participants and rate of technology adoption by the farmers.

2. 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 during 2010-11 and 2011-12. To assess the 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 farmers, the data on adoption level of tasar technologies after training

were also collected from randomly selected 50 participatory farmers by visiting their place of work and compared with pre-training status of technology adoption. The usefulness of training programmes (Training Utility Index) was assessed on the basis of various parameters such as the extent of facilities provided, training efficiency (course coverage, training methods and evaluation), overall management and coordination of the training programme. The impact of training on knowledge of the participants was also made for the training programmes, especially organized for the farmers, field staff of State Departments and students of different institutions (Rahmathulla *et al.*, 2003; Srinivasa *et al.*, 2007).

The evaluation indices of different assessment 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 formula (Srinivasa *et al.*, 2007 and Scott B. Parry, 2005.).

The data were analysed 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.

3. Results and Discussion

3.1 Number of Training Programmes Conducted

During 2010-11 and 2011-12, a total of 87 and 98 batches of training programmes respectively it covers various activities of tasar culture were organized by CTR&TI, Ranchi. Two batches of Post-Graduate Diploma in Sericulture (Non-mulberry) - PGDS (NM) course were also conducted at CTR&TI. Under all these training programmes, a total of 3427 persons (1801 persons under 87 programmes during 2010-11; 1626 persons under 98 programmes during 2011-12) were participated, including 29 candidates under PGDS (NM) course.

The officials and farmers participated in training programmes belonged to both conventional and non-conventional tasar growing States like Jharkhand, Orissa, Chhattisgarh, Madhya Pradesh, Uttar Pradesh and north-eastern region. In order to provide better exposure to field activities, some farmers' training programmes were organized on-field in the major clusters of tasar culture in Jharkhand. Shetty K. K., Sathyanarayana K. and Mukund V. Kirsur 2007).

3.2 Appraisal of Structured Course - PGDS (NM)

The results of evaluation of structured course *i.e.*, Post-Graduate Diploma in Sericulture (Non-mulberry) - PGDS (NM) conducted during 2010-11 and 2011-12 are presented in Table 1. In general the results indicate that training management index (68.9 and 68.2) worked out on the basis of opinion documented from the participants was quite satisfactory. The trainees had significant opinion about course content, evaluation system, course coordination and duration. However, they showed some reluctance on the

overall performance of faculties as indicated from the faculty index which were comparatively smaller (65.7 and 64.8) than other indices. The trainees expressed that though the faculty had excellent subject knowledge and imparting skills, there was some scope of improvement in faculty performance to make their teaching more fascinating and effective, by using modern audio-visual aids for subject presentation. Earlier such studies have been conducted to evaluate the effectiveness of training programmes organized for extension staff in mulberry sericulture. In some of the programmes, the trainees expressed partial satisfaction about faculty performance, especially subject presentation and use of modern teaching aids (Donald L. Kirkpatrick and James D. Kirkpatrick. 2006, Donald L. Kirkpatrick. 2007, Rahmathulla *et al.*, 2007; Srinivasa *et al.*, 2007).

3.3 Impact of Training on Acquiring Knowledge Level of Tasar Culture Technologies

The impact of training programmes on acquiring knowledge about tasar culture technologies by different target groups is presented in Table 2. The data collected indicate that there was a higher level of improvement in knowledge level (over pre-training) of all the target groups, ranging from 55.4 to 99.4% during 2010-11 and 63.4 to 82.7% during 2011-12. However, the improvement in knowledge was highest (99.4 and 82.7%) in case of the students. It may be because of their educational background as they did not study the tasar culture during their course of study. It could also be seen from data that the improvement in knowledge level of farmers (67.5%) was higher than extension officials (55.4 %) during 2010-11; however, it was reversed during 2011-12 as the pre-training knowledge level of the farmers improved in subsequent year. Though there was a declining trend in pre-training knowledge of extension officials in subsequent years, it may be due to the poor knowledge of officials in specific tasar technologies on which the training programmes were organized during 2010-12. Impact of training programmes on knowledge level of extension staff and farmers pertaining to technologies have been reported by various workers in mulberry sericulture (Rahmathulla *et al.*, 2003; Srinivasa *et al.*, 2007), agriculture (Murugesan *et al.*, 1998) and dairy (Kumar *et al.*, 1994).

3.4 Impact of Training on Adoption of Tasar Technologies in Farmers' Field

It could be inferred from the data presented in Table 3 that there was significant improvement in adoption rate of tasar culture technologies/practices by the farmers after attending training programmes, when compared with pre-training status of technology adoption. The higher rate of technology adoption (56.4% in 2010-11 and 51.7% in 2011-12) was observed in case of tasar silkworm seed production, followed by silkworm rearing (25.4% in 2010-11 and 25.1% in 2011-12); whereas it was least (19.6% in 2010-11 and 25.3% in 2011-12) in case of tasar host plant maintenance. It is obvious that the adoption of recommended technologies/practices would enhance cocoon yield and earning of farmers to a great extent. However, the farmers do not adopt some of the technologies or practices fully and prefer to adopt them partially due to various reasons. The present study highlights that the improvement in knowledge

level about technologies (Table 2) enhanced the rate of technology adoption by the farmers. Similar type of impact observations have been recorded earlier in training programmes organized for the farmers in mulberry sericulture (Rahmathulla *et al.*, 2003; Srinivasa *et al.*, 2007, ASCI.2007).

4. Conclusion

It is concluded from the present study that the imparting training to extension officials and farmers would enhance their knowledge about the improved and recommended tasar culture technologies which in turn would enhance the rate of technology adoption in field and ultimate the cocoon yield and earning of the tasar farmers. Therefore this training programme has a positive impact on their skill development and their knowledge level. Through this they can earn for their better livelihood and look after their families by increasing their annual income 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, Human Resource Developments (HRD) which is the need of the hour in Tasar culture.

Table 1: Evaluation of Post-Graduate Diploma in Sericulture (Non-mulberry) – PGDS course, Session 2010to2012

Sl No.	Assessment year	No. of participants	Training Utility Index		
			Training Faculty Index	Training Efficiency Index	Training Management Index
1	2010-11	17	65.7	73.3	68.9
2	2011-12	12	64.8	71.6	68.2

Table 2: Impact of different training programmes on knowledge of the participants

Sl No.	Category of participants	Knowledge Level							
		Year 2010-11				Year 2011-12			
		No. of participants	Pre-training (%)	Post-training (%)	Improvement (%)	No. of participants	Pre-training (%)	Post-training (%)	Improvement (%)
1.	Extension officials	100	56.9	88.4	55.4	100	44.3	72.4	63.4
2.	Tasar Farmers	100	46.7	78.2	67.5	100	46.0	77.3	68.1
3.	Students	17	35.4	70.6	99.4	12	37.6	68.7	82.7

Table 3: Impact of Training Programmes on Technology Adoption of the participants

Sl. No.	Technologies / Practices	Technology Adoption Level					
		Year 2010-11			Year 2011-12		
		Pre-training (%)	Post-training (%)	Improvement (%)	Pre-training (%)	Post-training (%)	Improvement (%)
1.	Tasar Host plant maintenance	42.4	50.7	19.6	45.0	56.4	25.3
2.	Tasar Silkworm rearing	58.2	73.0	25.4	60.1	80.2	25.1
3.	Tasar seed production	40.2	62.9	56.4	43.1	65.4	51.7

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