

## **A Study on Knowledge and Adoption Behaviour of Sericulturists in Dharwad District of Karnataka**

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(Received : June, 1996)

**Abstract :** A study conducted in Ranebennur and Shirahatti blocks of Dharwad district to measure extent of knowledge, adoption of sericulturists and reasons for non-adoption indicated that more than 70.00 per cent of the sericulturists have knowledge of common practices. However, less than 20.00 per cent know about chemical concentration of egg disinfection and number of times of formalin chaff treatment to worms. Non adaptability of recommended sericultural practices is because of high cost and non-availability of inputs.

### **Introduction**

Sericulture is a labour intensive agro based cottage industry. It has occupied an enviable position by providing additional employment and income for rural poor. India has taken rapid strides in sericulture development in recent years mainly due to the introduction of new strains of silkworm and improved cultural and silkworm rearing practices. Sericulture in Karnataka has two distinct features; as it is practiced in traditional and non-traditional areas. From the view point of extension services, the dominant attitude of the sericulturists in traditional areas is that they 'know what is to be known about sericulture'. Hence, it required a strong and dynamic extension effort. Whereas, in non-traditional areas, the farmers are aware that the 'sericulture enterprise is useful and suitable to them'. But, they do not know enough about it and its constituent operations. Here, the extension task is one of providing the knowledge of basic along with the guidance in practicing the enterprise. Thus, the approach, in the two contexts differ in its focus (Dwarkinath, 1991). In spite of intensive extension work, farmers do not take upto adopt certain technologies due to several reasons. In order to make the extension work more meaningful and effective, our extension personnel should know the knowledge and adoption level of sericulturists. Keeping the above point in view, this study was designed

to measure extent of knowledge, adoption and reasons for non-adoption.

### **Material and Methods**

The study was conducted in Ranebennur and Shirahatti blocks of Dharwad district. Based on maximum areas under sericulture and number of farmers practicing sericulture, six villages from each block were chosen. Ten farmers from each village were selected by using proportionate random sampling technique. Thus, totally 120 respondents were selected from 12 villages. The data were collected by using structured, pre-tested schedule, through personal interview method.

### **Results and Discussion**

Data presented in table 1 reveals that more than 70 per cent of the sericulturists have knowledge about type of leaf to be fed for chawki worms, number of feeds per day for matured worms, procedure of disinfection and preparation of formalin chaff. Whereas, less than 20 per cent knew about chemical concentration of egg disinfection and number of times of formalin chaff treatment to the worms. Further, knowledge on prevention and control of diseases is very poor. The reason for this might be that sericulture department has taken up massive disinfection of rearing houses by using formalin without giving much importance for educating the farmers. Similar

result was also observed by Rajashekaraiah (1979), Aswathanarayana (1989) and Sateesh (1990).

Adoption pattern of recommended sericultural practice is presented in the table 2 indicates that majority of sericulturists have not adopted time and quantity of compost and fertilizer application. This may be due to non-availability and high cost of fertilizers. Only 30.80 per cent of the sericulturists have separate rearing house, though silkworm rearing is highly sensitive and it calls for greater care and hygiene. Lack of conviction and low economic condition of sericulturists are the reasons for low adoption of this technology. Lack of knowledge was the reason for non-adoption of black boxing of eggs a day before hatching to make the eggs to hatch at a time, so that all the worms will start feeding and reach to maturity at a time. Non-availability and lack of knowledge was the reason for non-use of nylon net for bed cleaning by the sericulturists, though this is one of the important practices to prevent the spread of diseases in silkworm rearing. However, majority of them have adopted method of brushing, time of brushing and number of layings to be brushed for one acre of mulberry, type of leaf for Chawki worms, number of feeds per day, type of leaf for late aged worms and preparation of formalin chaff. Less cost, easy to follow and importance of the practices are the reasons for higher adoption of these practices. Similar results were also reported by Sreenivasa (1989), Siddaramaiah and Prakashkumar (1994), Gopal (1991) and Shivaraja (1985).

The reasons for non-adoption of recommended sericultural practices as perceived by sericulturists is presented in table 3. Non-availability of inputs (nylon net, chemicals), lack of knowledge, lack of finance, fear of adverse effect and feel not necessary are some of the major reasons perceived by the sericulturists for non-adoption or partial adoption of practices like, method of bed cleaning, black boxing of eggs, quantity of fertilizer and compost application, use of formalin chaff, disposal of diseased worms when they are few in number and disinfection of rearing house etc. Hence, the concerned change agents should give greater stress to solve these problems for the success of sericulture industry. Similar view was also expressed by the farmers in the study conducted by Jagannathan (1993) and Sreenivasa (1989).

From the above results, it is clear that there is lack of knowledge and non adoption of important practices. Unlike other enterprises, sericulture enterprise is very sensitive, it demands greater care and timely performance of each practice. Any deviation will lead to poor growth of worms and drastic reduction in the cocoon yield. Hence, sericulture extension workers should educate the farmers on this delicacy. They have to sensitize the farmers for quality leaf production and worm rearing. More emphasis should be given for educating sericulturists on technical management aspects coupled with timely supply and services.

**Table 1. Extent of knowledge of sericulturists with respect to selected recommended sericultural practices**

Sl. No.	Knowledge items	Know		Do not know	
		No.	Per cent	No.	Per cent
1	Type of leaf for chawki worms	120	100.00	0	0
2	Number of feeds per day for matured worms	112	93.33	08	6.66
3	Procedure of disinfection	92	76.66	28	23.33
4	Preparation of formalin chaff	91	75.83	29	24.17
5	Use of formalin chaff	78	65.00	42	35.00
6	Type of storage of leaves for chawki and late aged worms	68	56.66	52	43.33
7	Number of trays required for 100 dfis rearing	56	45.66	64	57.50
8	Quantity of compost application	51	42.50	69	57.50
9	Duration of disinfection process	42	35.00	78	65.00
10	Incubation of eggs	39	32.50	81	67.50
11	Concentration of formalin for disinfection	38	31.66	82	68.33
12	Interval between disinfection and brushing	30	25.00	90	75.00
13	Disposal of diseased worms when they are few in number	28	23.33	92	76.66
14	Chemical and concentration for egg disinfection	16	13.33	104	86.66
15	Number of time of formalin chaff treatment	12	10.00	108	90.00

Table 2. Adoption pattern of the sericulturists with respect to individual recommended practices of sericulture

Recommended Sericulture Practice	Adoption		Non-adoption partial adoption	
	No.	Per cent	No.	Per cent
<b>Compost</b>				
1. Quantity of compost	42	35.0	78	65.0
2. Time of compost application	26	21.7	94	78.3
<b>Fertilizer application</b>				
1. Quantity of N:P:K per acre	3	2.5	117	97.5
2. Time of fertilizer application	32	26.7	88	73.3
3. Method of fertilizer application	114	95.0	6	5.0
<b>Leaf plucking and storage</b>				
1. Correct time of the day at which leaf has to be plucked	109	90.8	11	9.2
2. Type of storage of leaves for chawki and late age worms	39	32.5	81	67.5
<b>Rearing house</b>				
1. Rearing house separate from dwelling	37	30.8	83	69.2
2. Correct type of roof of rearing house	36	30.0	84	70.0
<b>Disinfection of rearing house</b>				
1. Chemical used for disinfection	120	100.0	0	00.0
2. Concentration used for disinfectanting rearing house	48	40.0	72	80.0
3. Quantity of prepared spray solution used	32	26.7	88	73.3
4. Duration of disinfection process to rearing house	62	51.7	58	48.3
5. Time of conducting disinfection	29	24.2	91	75.8
<b>Black boxing of eggs brushing</b>	00	0.0	120	100.0
1. Method of brushing	120	100.0	0	00.0
2. Time of the day for brushing	108	90.0	12	10.0
3. Number of laying to be brushed in each of the trays	27	22.5	93	77.5
4. Number of layings to be brushed for one acre of mulberry	105	87.5	15	12.5
<b>Feeding</b>				
1. Type of leaf for chawki worms	118	98.3	2	1.7
2. Number of feed per day	116	98.7	4	3.3
3. Type of leaf for late age worms	115	95.8	5	4.2
<b>Bed cleaning</b>				
1. Method of bed cleaning	0	0.0	120	100.0
2. Frequency of bed cleaning at different instars	103	85.8	17	14.2
<b>Control of diseases and pests</b>				
1. Preparation of formalin chaff	115	95.8	05	4.2
2. Method of using formalin chaff	46	38.3	74	81.7
3. Correct number of time the formalin chaff to be used in each instars	14	3.3	106	96.7
4. Correct method of disposal diseased worms when they are few in number	21	17.5	99	82.5

Table 3. Reasons for non-adoption/partial adoption of the recommended practices of sericulture as perceived by sericulturists

Recommended practices	Non adoption/ partial adoption		Reasons for non adoption/partial adoption (%)	Per cent
	No.	Per cent		
1. Method of bed cleaning	120	100.00	Nylon net not available	80.00
			Lack of knowledge	20.00
2. Black boxing of eggs (dfis)	120	100.00	Lack of knowledge	100.00
3. Quantity of NPK per acre of mulberry	117	97.50	Lack of knowledge	43.30
			Lack of finance	25.00
			Fear of adverse effect	14.20
			Recommended quantity is more	15.00
4. Number of times the formalin chaff to be used in each instar	116	97.70	Fear of adverse effect	97.70
5. Disposal of diseased worms when they are few in numbers	99	82.50	Lack of knowledge	29.10
			Complicated	21.70
			Feel not necessary	31.70
6. Disinfection of rearing house, concentration of chemical, quantity of disinfection process and time of disinfection	84	70.00	Lack of knowledge	13.00
			No separate house	48.00
			Chemical not available in time	9.00
7. Quantity of compost per acre of mulberry and time of application	78	85.00	Lack of knowledge	25.00
			Not available in time	23.30
			Lack finance	16.70

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