



## EVALUATION OF BIVOLTINE P1 SEED COCOONS GENERATION AND PRODUCED COMMERCIAL BIVOLTINE HYBRID DFLS AT SSPC VIJAYAPURA

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### ABSTRACT

Selection of P1 seed farmers (ASRs) for different combination of P1 seed cocoon generation and supply to SSPC Vijayapura to produced large scale commercial double hybrid and SK hybrid dfls. Sericulture is one of the most important rural industries practiced since several decades. It has certain inherent level to educate Sericulturists, still a wide gap exists between there commended technology and actual adoption by Sericulturists. To plan a suitable intervention strategy, to bridge this gap, it is necessary to understand the present knowledge and adoption level for improved technologies, so also existing mulberry leaf yield and quality seed cocoon generation. Therefore, present study was conducted to know the extent of adoption of improved practices at farmer's level in selected areas of ASR farmers Doddaballapura, Koratagere, Nelamangala and Siddlaghatta covering five locations with purpose of good quality of seed cocoons generation and to produce quality dfls. During the year 2018-19 significant achievement of SSPC Vijayapura Production of Bivoltine F1 Silkworm Eggs on large scale as per the annual targets of 25 lakhs this centre could record a total production a quantity of 38,40,050 lakhs Bivoltine F1 dfls was produced in different combination month wise and dfls recovery Table-1&2.

**KEYWORDS :** Bivoltine Double hybrid, SK Hybrids, Silkworm, Mulberry, Fc1, Fc2, SK hybrids

### INTRODUCTION

The common Silkworm *Bombyx mori* Linnaeus (Lepidoptera: Bombycidae) spins valuable silk fiber, making it one of the most beneficial insects to mankind, and is becoming an attractive multifunctional material for both textile and non-textile uses. Almost all-commercial silk is made from cocoons spun by silkworms of the genus *Bombyx mori* L. Bivoltine silkworm rearing is a very easy which requires various technical aspects, specific management skills, due to understanding and experience. The practice of sericulture consists of three major activities viz., Mulberry cultivation, Silkworm Rearing and Egg Production (Qadri et. al. 2010). Silkworm is an economical and helpful insect and is reared by many ASR farmers selected areas. The silkworm breeding plays an important role for commercial seed production.

### MATERIALS AND METHODS

In the present study the beneficiary ASR farmers acreage under mulberry was also increased by adopting new technologies and well suitable mulberry gardens and rearing houses which was due to fundamental motivation of the farmers themselves after getting sustainable benefit through P1 Seed cocoon generation in different combinations Like FC1, FC2 and SK6, SK7 races and by-back system as per the standard norms of cocoon assessment based on the pupation percentage (80-100 %) and fix the price depends up on the quality grainage parameters (% of pupation) for the preparation of commercial dfls (Double hybrids) production at SSPC Vijayapura (Chowdhury et. al 2002 and Hiriyana et. al. 2008 Ramkant,et. al. 2011).

### TECHNOLOGIES TO BE IMPLEMENTED IN THE SELECTED AREA:

- Maintenance of Mulberry Plantation
- Pruning / leaf harvesting, Leaf transportation and preservation techniques
- Disinfection of rearing house
- Chawki/late age rearing technologies
- Use of Bed disinfectants
- Integrated management of mulberry pest and diseases
- Silkworm disease management

- Seed Cocoon harvesting and transportation techniques

### RESULTS & DISCUSSION

The productive bivoltine P1 seed rearing of FC1, FC2 and SK6, SK7 races had resulted in a linear improvement of cocoon yield and quality. However, these productive seed cocoons could make much impact to the selected farmers who could able to provide required input and adopted new technologies and managerial skills, which were essential to realize the maximum, potential of these P1 Seed cocoon generation through selected ASRs during the year 2018-19 Table-1 But whenever, there is an improvement in qualitative and quantitative characters significantly increasing trend as for the standard norms to produced good quality of commercial bivoltine Double hybrids and SK hybrid dfls for large scale and kept at cold storage for different hibernation schedules. During the year 2018-19 significant achievement of SSPC Vijayapura Production of Bivoltine F1 Silkworm Eggs on large scale as per the annual targets of 25 lakhs this centre could record a total production a quantity of 38, 40,050 lakhs Bivoltine F1 dfls was produced in different combination month wise production during the year 2018-19 like Fc1x Fc2, Fc2 x Fc1 and Sk6 x Sk7 and Sk7xSk6 hybrids and egg yield/recovery per kg of seed cocoons Fc1xFc2 74.74% , Fc2xFc1 72.44% and SK6xSK7 58.29, SK7xSK6 59.13% respectively and overall achievement 153.60 % production this is ever since establishment of this centre table-1&2. (Geetha et. al. 2001, Kushwaha RV and Singh NR 2013).

### Farmers Success story:

**Mr. B. Shiva Kumar**, Mallahalli, Siddlaghatta Taluk Chickaballapura District The Farmer separately well maintained suitable, V1 Mulberry Garden and drip adopted irrigation 3.5acrs and separate rearing house for the capacity of 200-250dfls P1 seed rearing (FC1 and FC2) per crop and he produced 75-80kgs per 100 dfls yield and pupation rate an average 90-92 (%) percentage @rate of Rs. 780-785/kg of seed cocoons as per the standard norms. The total income present crop is Rs. 117000/ (One Lakh seventeen thousand only) he reared per year minimum 5-6crops and lost two years he is under adopted seed cocoon producer at SSPC Vijayapura

and also look after his family by increasing annual income through mulberry sericulture. The present investigation, the ASR farmers practiced both sericulture and agriculture crops

for earning their livelihood and to increase the socio-economic conditions in their family.

#### Statement Showing The Combination Wise Production Of Dfls At Sspc, Vijayapura During The Year - 2018-2019

#	Combination	Actual cocoons		Total Dfls produced (No.)	Egg yield per kg of cocoon (gm)
		by number	by weight (kg)		
1	FC1xFC2	4,565,793	7,111.950	1,476,600	74.744
2	FC2xFC1	4,148,639	6,663.540	1,419,800	72.444
7	SK6XSK7	1,310,334	2,257.350	469,950	58.292
8	SK7XSK6	1,266,081	2,242.800	473,700	59.139
	<b>Total</b>	<b>11,290,847</b>	<b>18,275.640</b>	<b>3,840,050</b>	

#### Month-wise & Combination-wise Bivoltine Hybrid Dfl Production During The Year -2018-2019

#	MONTH	TARGET	COMBINATION- WISE PRODUCTION /ACHIEVEMENT					
			FC1 x FC2	FC2 xFC1	SK6XSK7	SK7XSK6	TOTAL	%
1	April '18	1.00	109,200	93,100	-	-	202,300	8.09
2	May	0.00	-	-	73,250	70,800	144,050	5.76
3	June	1.00	-	-	57,200	51,550	108,750	4.35
4	July	2.50	54,150	41,050	79,550	83,050	257,800	10.31
5	August	2.75	138,800	154,550	-	-	293,350	11.73
6	September	2.75	145,700	176,650	-	-	322,350	12.89
7	October	2.75	124,350	124,350	102,500	117,200	468,400	18.74
8	November	2.75	251,550	227,700	-	-	479,250	19.17
9	December	2.75	276,150	234,950	-	-	511,100	20.44
10	January '19	2.75	92,550	79,650	85,100	90,800	348,100	13.92
11	February	2.00	195,550	201,750	72,350	60,300	529,950	21.20
12	March	2.00	88,600	86,050	-	-	174,650	6.99
Total		25.00	1,476,600	1,419,800	469,950	473,700	3,840,050	153.60
Percentage of production			56.79	54.61	18.08	18.22	153.60	



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