



ISSN: 2230-9926

Available online at <http://www.journalijdr.com>

# IJDR

International Journal of Development Research

Vol. 14, Issue, 04, pp. 65359-65361, April, 2024

<https://doi.org/10.37118/ijdr.28113.04.2024>



RESEARCH ARTICLE

OPEN ACCESS

## P1 SEED COCOONS GENERATION THROUGH ADOPTED SEED REARES (ASRs) AND PRODUCED QUALITY OF COMMERCIAL F1 DOUBLE HYBRID DFLS.

\*Dr. P. M. Muniswamy Reddy

Silkworm Seed Production Centre, National Silkworm Seed Organization, Central Silk Board, Vijayapura-562135, India

### ARTICLE INFO

#### Article History:

Received 16<sup>th</sup> January, 2024

Received in revised form

03<sup>rd</sup> February, 2024

Accepted 11<sup>th</sup> March, 2024

Published online 30<sup>th</sup> April, 2024

#### Key Words:

Bivoltine Double hybrid, Silkworm, Mulberry, FC1&, FC2, New hybrids, Bivoltine F1 double hybrid dfls.

#### \*Corresponding author:

Dr. P. M. Muniswamy Reddy,

### ABSTRACT

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 recommended technology and actual adoption by Sericulturists. Selection of P1 seed farmers (ASRs) for different combination of P1 seed cocoon generation and supply to SSPC Vijayapura to produced large scale commercial F1 bivoltine double hybrid and new hybrid dfls. 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 zones of ASR farmers Hullenahalli, Buchanahalli, Bidrakate, (Tumkur Taluk, Tumkur District) and Vaderahalli & Baktharahalli, (Doddaballapura Taluk, Bangalore Rural District) etc; covering five-six locations with purpose of good quality of seed cocoons generation and to produce quality dfls. During the last five years (2018-2023) annual target was significantly achieved of SSPC Vijayapura respectively. viz; Production, distribution, egg recovery and kept at cold storage for different preservation schedules of Bivoltine F1 double hybrid dfls (table & fig: -1, 2 & 3).

Copyright©2024, Dr. P. M. Muniswamy Reddy et al. This is an open access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Citation: Dr. P. M. Muniswamy Reddy, 2024. "P1 seed cocoons generation through adopted seed reares (asrs) and produced quality of commercial f1 double hybrid dfls". International Journal of Development Research, 14, (04), 65359-65361.

## 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 New Hybrids 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 (F1 bivoltine double hybrids) production and different preservation schedules 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 AND DISCUSSION

The productive bivoltine P1 seed rearing of FC1, FC2 and New hybrids (SK6, SK7, single hybrid) 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 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 F1 Double hybrids and SK hybrid new hybrid dfls for large scale and kept at cold storage for different hibernation schedules. SSPC Vijayapura Production of Bivoltine F1 Silkworm Eggs on large scale as per the significant achievements annual targets of this centre could recorded Bivoltine F1 dfls was produced in different combination year wise production, distribution and egg recovery recorded during the year (Geetha *et. al.* 2001, Kushwaha RV and Singh NR 2013) (2018-19) target 25 Lakhs achieved 3840050L, Distribution 43,33,300L and egg recovery 73.59%/Kg of Seed Cocoons, (2019-20) target 30 Lakhs achieved 2914150L Distribution 1831850L and egg recovery 78.78% /Kg of Seed Cocoons, (2020-21) target 26 Lakhs achieved 2368250L Distribution 1594150L and egg recovery 76.20% /Kg of Seed Cocoons, (2021-22) target 26 Lakhs achieved 2134450L Distribution 1768900L and egg recovery 76.91% /Kg of Seed Cocoons (2022-23) 28 Lakhs achieved 2756250L Distribution 2756250L and egg recovery 71.05% /Kg of Seed Cocoons respectively (table & Fig: 1, 2 & 3).

**Farmers Success story of Mr. Mohan,** Bakathrahalli, Doddaballapura, Taluk, Bangalore Rural Dist. He was reared bivoltine P1 Seed Rearing (Fc<sub>1</sub>&Fc<sub>2</sub>), separately well maintained suitable, V<sub>1</sub>Mulberry Garden wider spacing 8x8feet and adopted drip irrigation 5-6acrs and separate rearing house measuring about (80 x 23feet) in 2 numbers for the capacity of 400-500dfls perbatch an average yield per 100 dfls 65-70kgs @ rate of (present) Rs.1250-1300/kg know recent crop he reared 450dfls of Seed (Fc<sub>1</sub>&Fc<sub>2</sub>) and he got Fc<sub>1</sub> 120kgs, pupation 94% @ rate of 1292/- 155040/- and he got Fc<sub>2</sub> 190 kgs the pupation rate is 97% @ rate of 1300/- percent as per kg of seed cocoons as for the standard norms the total income of the Rs. 402040.00 (Four Lakhs two thousand fortyonly).

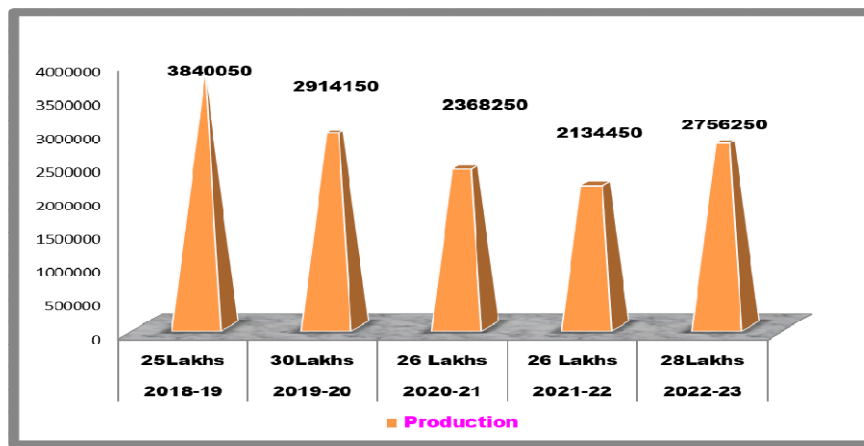
He reared per year minimum five crops and 10 years experiences in P1 seed rearing and to supply good quality of seed cocoons (above 90-95% pupation rate) to SSPC Vijayapura for the commercial F1 bivoltine loose egg production. He practices only sericulture is the best option in present ecological condition. He is very much willing to Bivoltine P1 seed rearing and to produced good quality of seed cocoons to supply to SSPC Vijayapura. He expressed Sericulture is only one of my occupations and also look after my family by increasing annual income through mulberry sericulture throughout the year. It will also have positive impact on the neighboring farmers and the entire area shall be benefitted.

**Targets & Achievements**

**Table 1. Production of dfls at, SSPC- VIJAYAPURA. for last five years**

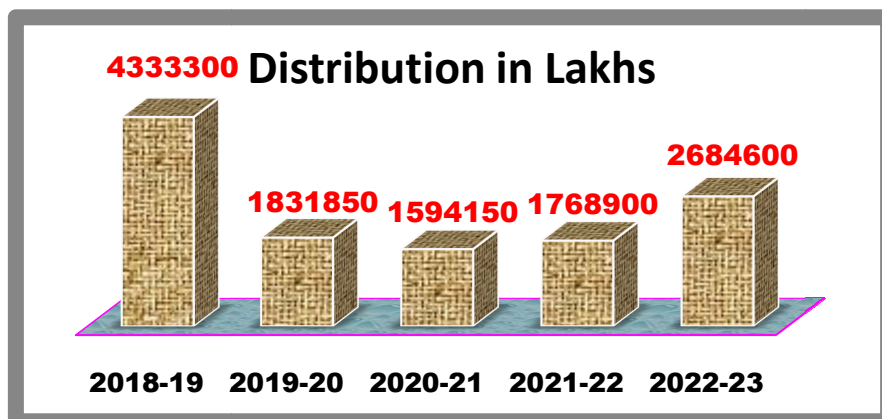
Year	2018-19	2019-20	2020-21	2021-22	2022-23
Targets	25Lakhs	30Lakhs	26 Lakhs	26 Lakhs	28Lakhs
Production	3840050	2914150	2368250	2134450	2756250

**Fig. 1. Production of dfls at sspc vijayapura for the last five years**



**Table 2. Distribution of dfls at, sspc- vijayapura. for last five years**

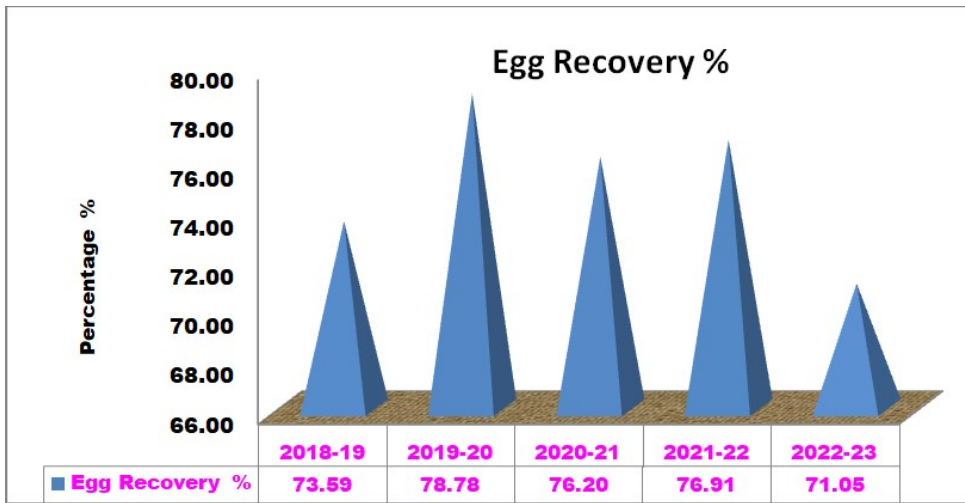
Year	2018-19	2019-20	2020-21	2021-22	2022-23
Distribution in Lakhs	4333300	1831850	1594150	1768900	2684600



**Fig. 2. Distribution of dfls at sspc vijayapura for the last five years**

**Table 3. Egg Recovery of Bivoltine F1/Kg of Seed Cocoons during the lost Five years**

Year	2018-19	2019-20	2020-21	2021-22	2022-23
Egg Recovery %	73.59	78.78	76.20	76.91	71.05



**Fig. 3. EGG Recovery % of bivoltine f1dfls/kg of seed cocoons during the lost five years**

## CONCLUSION

The present global scenario clearly indicates the enormous opportunities for the Indian Silk Industry if exploited. The need of the hour is to produce more gradable internationally acceptable bivoltine silk with reduced cost of production to meet the growing demands of quality silk. Realizing this, the Govt. of India had ventured to make all efforts to boost bivoltine production in the country. 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 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 F1 Double hybrid dfls.

## REFERENCES

Chowdhury, N.B.2002. Impact of adoption of new technologies in Palamner area of Andhra Pradesh. *Indian Silk*. 40; 15-16.

Geetha Devi, R.G. and Kumaresan, P. (2007) In: Workshop on Sericulture Sustainability and Entrepreneurship in Tamil Nadu, R S R S, Salem and Periyar University, Salem, 29th March, p.21-27

Geetha, G. S., Srinivasa, G., Jayaram, H., Iyengar, M.N.S., and Vijayprakash 2001. Socioeconomic determinants of farmer oriented technology packages for sericulture-a field study. *Indian J. Seric.*, 40: 96-99

Hiriyana, R.G., Geetha Devi, Suma, A.S., and Kumaresan, P. 2008. IVLP - A case of Srirangapatna cluster in Karnataka. *Indian Silk*. 47:5-8.

Kushwaha RV and Singh NR (2013). Extent of adoption of improved sericultural practices by the sericulturists of Buldhana district of Maharashtra. *Agriculture Update* 8(3) 469-471.

Ramkant, Anil Dhar, Raina SK and Pandey (2011). Impact of improved sericultural technology on cocoon productivity at Farmer's level in Kathua district of J&K. In *22nd All India Congress of Zoology* Dec. 29 -31.

Qadri SFI, Malik MA, Sabhat A and Malik FA (2010). Adoption of improved sericultural practices by sericulturists in border area of Kashmir. *International Journal of Agricultural and Statistics Sciences* 6(1)197-201.

\*\*\*\*\*