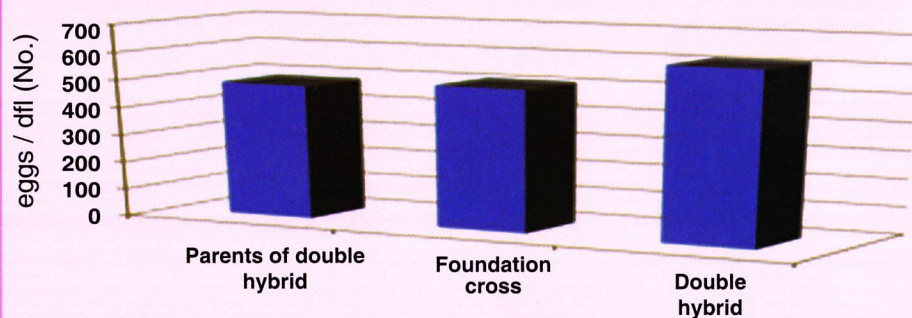


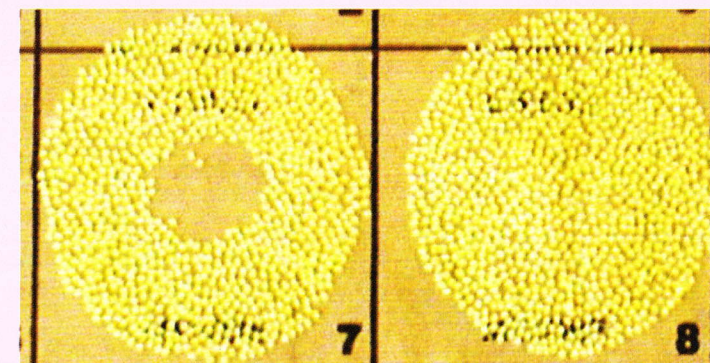
The production of bivoltine single hybrid eggs at grainages faced frequent problems due to poor quality cocoons produced by P1 seed farmers. Keeping this in view, for easy rearing of foundation crosses (FCs) and also to increase the egg recovery at grainages, double hybrids were developed. Double hybrids are known to have more genetic plasticity to buffer against adverse climatic condition and can be reared throughout the year with success of first double hybrid (CSR6 x CSR26) x (CSR2 x CSR27) developed by CSR&TI, Mysore. There is a huge demand for double hybrids in the country. Towards this, the Institute has ventured out with development of new double hybrid (CSR50 x CSR52) x (CSR51 x CSR53). This double hybrid consists of two FCs viz., oval FC (CSR50 x CSR52) and dumbbell FC (CSR51 x CSR53) and these FCs are produced by two oval type parental breeds, CSR50 and CSR52 and two dumbbell type parental breeds CSR51 and CSR53. This new double hybrid is having an cocoon weight of 2.15 g, shell weight of 0.510 g shell percentage of 23.7 %, raw silk percentage of 19.9 %, filament length of 1180 m, reelability percentage of 86 %, neatness of 95 p and has recorded cocoon yield of 68.75 kg / 100 dfls in the field. The hybrid has also shown improvement in silk productivity by giving the renditta of 6.0 against the present 6.5 renditta in the existing bivoltine hybrids. Added advantage of higher egg recovery of 80.0 g/kg of cocoons has also been obtained in this hybrid.

The graineurs are more benefited by higher egg recovery (15 ~ 20 %) as compared to single hybrid. In addition, seed farmers rear foundation crosses, as they are more robust and easy for rearing when compared to pure breeds.



performance of hybrids in the laboratory

Hybrids	Fecundity	Pupation (%)	Cocoon yield/10,000 larvae (kg)	Cocoon weight (g)	Shell weight (g)	Shell (%)	Raw silk (%)	Filament Length (m)	Neatness (p)
Krishnaraja	620	95.1	19.97	2.10	0.496	23.6	19.7	1075	94
Jayachamaraja	625	95.2	20.47	2.15	0.510	23.7	19.9	1180	95
CSR2xCSR4	540	95.6	19.10	2.01	0.472	23.5	18.5	1050	94



DFIs of 'Jayachamaraja' (CSR50 x CSR52) x (CSR51 x CSR53)

Field performance:

A total quantity of 20020 dfls of 'Jayachamaraja' (CSR50 x CSR52) (CSR51 x CSR53) were tested at different locations of Karnataka, Tamil Nadu and Andhra Pradesh and the hybrid recorded an average cocoon yield of 68.72kg /100 dfls. The state wise break up shows that a total of 5250 dfls were distributed to 24 farmers in Karnataka and the hybrid recorded an average cocoon yield of 61.64 kg /100 dfls. In Tamil Nadu, a total quantity of 11320 dfls were distributed to 65 farmers and the hybrid recorded an average cocoon yield of 73.26 kg /100 dfls. In Andhra Pradesh, a total quantity of 3450 dfls were distributed to 14 farmers and the hybrid recorded an average cocoon yield of 64.59 kg /100 dfls.

Salient features of Jayachamaraja;

- Productive hybrid and easy to handle by farmers under hygienic conditions
- Cocoons are bright white with intermediate shape and medium grains
- Cocoon yield 65-70 kg /100 dfls
- Hybrid with high cocoon shell ratio (22-24%) and raw silk recovery (19.0 to 20.0%)
- Easy in raising seed cocoons (foundation crosses) by seed farmers
- High of egg recovery (20% more) than single hybrids
- Better crop stability at commercial farmer
- Relatively tolerant to diseases
- High silk quality (2A ~3A grade)
- Better return for cocoon producer and reeler
- Renditta : 5.5 to 6.0



Published by Dr. B. B. Bindroo, Director

Central Sericultural Research & Training Institute
(Central Silk Board, Ministry of Textiles, Govt. of India)
Srirampura, Mysore - 570 008
Telephone: 0821-2362757, 2362406
Fax: 0821-2362845; Web: www.csrtimys.res.in
email: csrtimys.csb@nic.in

NEW BIVOLTILE SILKWORM DOUBLE HYBRID, **'JAYACHAMARAJA'** (CSR50 x CSR52) X (CSR51 x CSR53) FOR HIGH EGG RECOVERY, CROP STABILITY AND SILK PRODUCTIVITY



B.B. Bindroo , A. Naseema Begum and N. Mal Reddy



SILKWORM BREEDING LABORATORY

Central Sericultural Research & Training Institute
(ISO 9001: 2008 Certified)
(Central Silk Board, Ministry of Textiles, Govt. of India)
Srirampura, Mysore-570 008