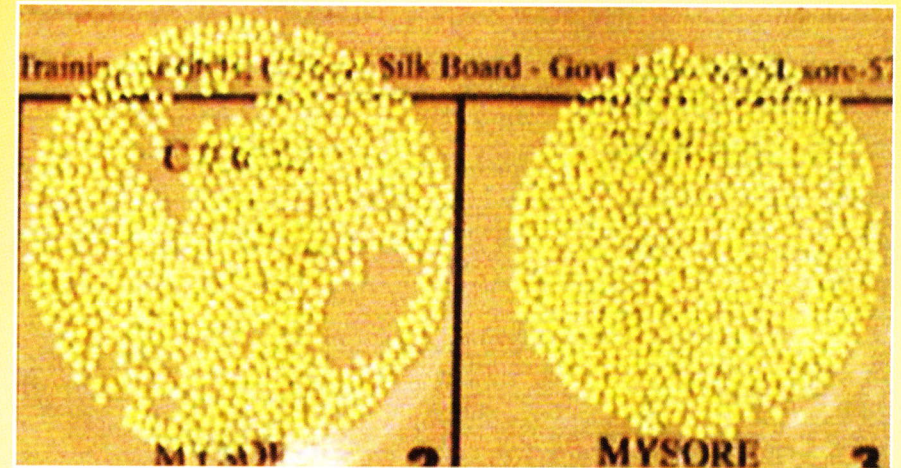


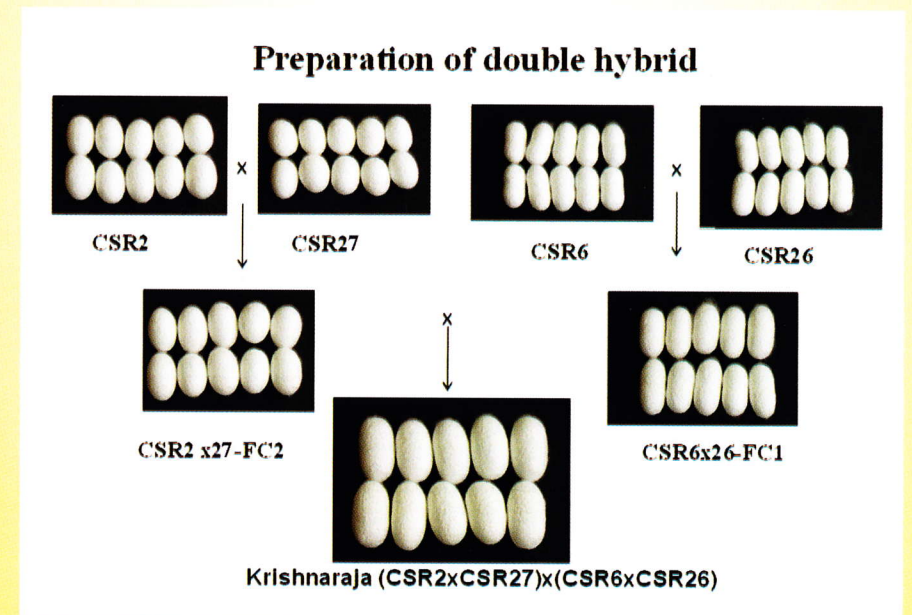
The silkworm breeds play an important role for high cocoon yield and silk quality. Introduction of the hybrid 'CSR2 x CSR4' during 1997 has revolutionized the Indian sericulture industry in the production of quality silk for the first time. Of late, considering the importance of the introduction of an exclusive bivoltine hybrid to bring quantitative and qualitative improvement in sericulture, many productive and robust bivoltine hybrids (CSR hybrids) are being extensively reared by the farmers of South India. The CSR hybrids are more productive and robust, which can be easily reared by the farmers by adopting appropriate rearing technology. However, owing to the existence of negative correlation between high cocoon shell ratio and low pupation rate in pure races, the handling of these pure races needs more care and attention and a slight negligence will lead to non availability of parental cocoons resulting in total failure of the programme. To overcome this, it is highly imperative to develop double hybrids with suitable foundation crosses for easy rearing and production of seed cocoons with high pupation rate. This helps not only in high egg recovery but also in quality seed production. Accordingly, the concerted efforts had resulted in the development of suitable bivoltine double hybrid for commercial exploitation.

Even though, the hybrid has the potential to give more yields after the adoption of all the technologies, it was not possible to obtain high egg recovery from its parents (P1 cocoons). Usually, breeds with high cocoon shell ratio show low viability and produce less number of eggs. However, to increase the egg number and recovery, the mother moths should have broad genetic base (foundation crosses). Foundation crosses include dumb-bell x dumb-bell and oval x oval crosses. By utilizing these foundation crosses, double hybrid eggs are produced. Besides, the foundation crosses are easy to rear by farmers and results in healthy pupae as compared to single parents. The double hybrids have more genetic plasticity to buffer against adverse climatic conditions and thereby resulting in crop stability than single hybrids. By realizing this clear cut advantage, sericulturally advanced countries have successfully exploited the double hybrid concept commercially. Similarly, in India, for the past over a decade, concerted efforts were made in developing double hybrids to withstand the fluctuating environmental conditions. This has resulted in the development of the double hybrid, Krishnaraja (CSR2 x CSR27) x (CSR6 x CSR26)



Dfl of 'Krishnaraja'

The double hybrid is popular among the farmers of Karnataka, Tamail Nadu and Andhra Pradesh. The double hybrid recorded cocoon yield of more than 68.00 kg/100 dfls. The quality of the silk produced is on par with the single hybrid, CSR2 x CSR4.



Salient features of Krishnaraja:

- ☛ Productive hybrid and easy to handle by farmers under hygienic conditions
- ☛ Cocoons are bright white with intermediate shape and medium grains
- ☛ Hybrid with high cocoons shell ratio (22-24%) and raw silk recovery (18.0-19%)
- ☛ Cocoon yield 65-70 kg /100 dfls
- ☛ High egg recovery (15-20% more) than single hybrid
- ☛ Better crop stability at commercial farmer
- ☛ High silk quality (2A ~3A grade) on par with single hybrid
- ☛ Non-occurrence of non-hibernating eggs
- ☛ Better return for cocoon producer and reeler
- ☛ Renditta : 5.5-6.0



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BIVOLTINE DOUBLE HYBRID

'KRISHNARAJA'

(CSR2 x CSR27) X (CSR6 x CSR26)

FOR HIGH EGG RECOVERY AND CROP STABILITY



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



SILKWORM BREEDING LABORATORY

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