

- Light greenish yellow, oval cocoons with less floss, compact shell and medium grains
- Reels completely till pelade layer resulting in high raw silk recovery (75-79%), and raw silk percent (14.5-16.0%)
- Longer filament length (>900 m) with high neatness (>88p)
- Good tenacity (> 3.7 g/d), elongation (>22%) and cohesion (>60 strokes) rendering it fit to be reeled on MRM as well as ARM producing 2A-3A grade silk suitable for power looms
- Higher returns for cocoon producers (₹ 30-40 per kg of cocoons) and reelers (500-600 per kg silk) as compared to PM x CSR2)

### Bed space and leaf requirement for 100 dfls (50,000 eggs)

Stage	Rearing space (Sq. ft)		Quantity of mulberry (kg)
	At the beginning	At the end	
1 <sup>st</sup> instar	12 (2 trays)	30 (5 trays)	6 *
2 <sup>nd</sup> instar	30 (5 trays)	60 (10 trays)	20*
3 <sup>rd</sup> instar	100	200	150**
4 <sup>th</sup> instar	200	400	500**
5 <sup>th</sup> instar	400	800	2500**
* Leaf    ** Shoot			

### Advantages over the existing crossbreed

- Superior in economic traits like cocoon shell weight, shell percentage, renditta, neatness, size deviation, tenacity, cohesion and elongation.
- Can be reeled on both Multiend Reeling Machine (MRM) and Automatic Reeling Machine (ARM).
- Produces gradable silk (2A-3A) suitable for power looms and modified mechanized handlooms as both warp and weft.



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## CAUVERY GOLD (MV1 × S8)

**New Improved Crossbreed (ICB)**  
for cocoon productivity and silk quality



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Majority of Indian Sericulture Industry is crossbreed based, which contributes to more than 80% of mulberry raw silk produced. The most popular crossbreed in Southern India is PM × CSR2 (Kolar Gold). It has limitations like lower cocoon shell content, high renditta and low silk quality, which render it not suitable to Indian power loom sector. Keeping this in view, many crossbreeds were developed to replace PM × CSR2 with higher shell content and improved fibre quality. But they did not sustain in the field due to low expression of hybrid vigour in terms of survival and cocoon weight. In this direction, a new multivoltine line has been isolated using improved multivoltine lines through directional selection and inoculating larvae after 2<sup>nd</sup> moult with Viral pathogens (BmNPV, BmIFV & BmDNV) causing grasserie and flacherie diseases in silkworm. The newly isolated breed is named as MV1 characterized by high survival besides stability in cocoon traits. Further, a new crossbreed combination MV1 × S8 has been identified through hybrid evaluation and named as “Cauvery Gold”.

The newly identified crossbreed is superior to the popular crossbreed PM × CSR2 with respect to cocoon productivity and silk quality. Further, it also shows improvement over the improved crossbreed L14 × CSR2 with respect to survival and productivity. The limited field trials undertaken with the farmers is very encouraging with cocoon yields ranging from 75-85 kg/100 dfls and renditta from 5.96 to 6.32.

### Salient features of Cauvery Gold

- Tolerant to silkworm diseases
- High survival (>90%)
- Easy to rear by farmers
- Higher productivity (70-85 kg/100 dfls)
- Plain larvae with bluish white body

### Laboratory Performance

Crossbreed	Fec. (No)	Surv. (%)	SCW (g)	SSW (g)	Shell (%)	RLB (%)	FL (m)	RS (%)	N (p)
Cauvery Gold	506	98.40	1.792	0.389	21.7	86	860	14.80	90
L14 × CSR2*	490	84.53	1.654	0.329	19.9	88	811	14.04	90
PM × CSR2**	475	93.22	1.534	0.298	19.4	84	663	13.40	86
Improvement over *	3.27	16.41	8.34	18.24	9.05	2.33	6.04	5.41	
Improvement over **	6.53	5.56	16.82	30.54	11.86	4.76	29.71	10.45	4.65

### In-house Performance

Fec. (No)	LD (days)	Surv. (%)	Y/ 100 dfls (kg)	SCW (g)	SSW (g)	Shell %	RLB (%)	FL (m)	Ren-ditta	RSR (%)	N (p)
520	23	90.47	78.00	2.114	0.456	21.60	80.85	903	6.49	73.12	90

### Field Performance (41,350 dfls with 211 formers)

Fec. (No)	LD (days)	Surv. (%)	Y/ 100 dfls (kg)	SCW (g)	SSW (g)	Shell %	RLB (%)	FL (m)	RSR (%)	Ren ditta	N (p)
550	23	88-92	73.00-85.00	1.90-2.00	0.350-0.432	18.42-21.31	89-90	911-962	75-79	5.96-6.32	88-90

Fec.-Fecundity; LD-Larval duration; Surv-Survival; Y/100 dfls- Cocoon yield/ 100 dfls; SCW- Single cocoon weight; SSW- Single shell weight; RLB-Reelability; FL-Filament length; RSR-Raw silk recovery; N-Neatness; RS-Raw Silk