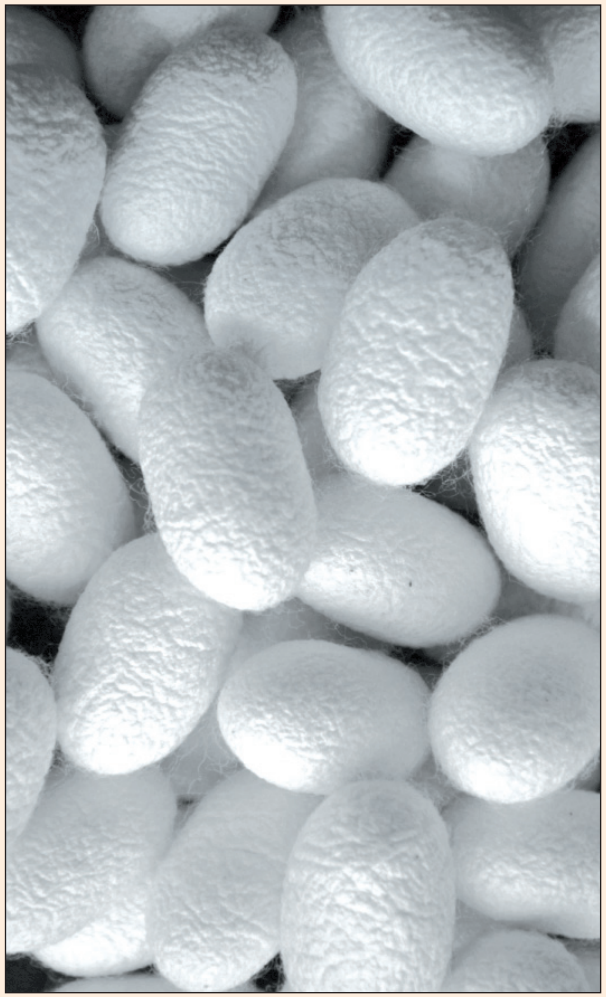
Reeling characteristics of G11 x G19

Parameters	KA (4)	TN (5)	AP (11)
SCW (g)	1.473-1.662	1.415-1.880	1.563-1.79
SSW (g)	0.309-0.335	0.295-0.360	0.355-0.435
Shell Ratio (%)	19.7-22.8	19.2-21.6	21.2-23.7
Reelability (%)	70.74-79.79	79.7-87.7	76.1-88.6
AFL (m)	756-914	741-810	827-1011
NBFL (m)	504-681	616-690	666-780
Denier (d)	2.55-2.79	2.74-2.80	2.63-2.83
Renditta (Kg)	6.46-6.76	7.1-7.8	6.2-6.9
Raw Silk (%)	12.33-15.49	12.2-14.0	14.8-17.4
RSR (%)	69.79-78.72	60.12-68.20	64.9-81.3
Neatness (p)	94-96	91-93	90-97
Grade	A-2A	2A	2A

Salient features of G11 × G19

- Double hybrid for sub-optimal conditions
- Suitable for small and marginal farmers
- Plain larvae with bluish white body colour
- White cocoons with intermediate shape and medium grains
- Cocoon Shell Percentage: 22-23%
- Raw Silk Recovery: 16.0-17.0%
- Cocoon Yield: 65-70 kg/100 dfls
- Renditta: 5.5-6.0
- Fibre quality: A-2A
- Better digestibility and higher survival
- Suitable for all regions and seasons
- Crop stability at commercial farmer



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G11 × G19
A new bivoltine double hybrid for sub-optimal conditions

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In India, productive bivoltine CSR breeds with high silk content and raw silk recovery have been developed and largely, a single hybrid, CSR2 × CSR4 and a double hybrid, (CSR6 × CSR26) × (CSR2 × CSR27) are commercially exploited for the production of nearly 5000 MT of bivoltine silk. With an objective of improving the robustness of productive bivoltine parental breeds by using digestive amylase as a marker (due to its close association with survival, better digestibility and isozyme polymor-phism), a breeding plan was designed for introgression of high amylase activity genes from polyvoltine donors into the CSR2 and CSR4 breeds. Near isogenic lines of CSR2 (GEN1 and 2C) and CSR4 (4D and 4S) were thus developed from polyvoltines namely, Pure Mysore, C.Nichi, Daizo and Sarupat respectively. The new lines were also tested for thermo-tolerance by exposing the pure, foundation crosses and double hybrids to high temperature and high humidity. The resultant double hybrid, G11 × G19 comprises of oval foundation cross, G11 (GEN1 × 2C) and dumbbell foundation cross, G19 (4D × 4S). Large scale in-house test of this hybrid at CSRTI-Mysuru and on station trials at RSRS farms of southern states showed promising results and hence taken for authorization trials with farmers of South India. A total quantity of 4170 dfls of foundation crosses were reared to produce 5.06 lakhs of G11 x G19 (65.13 g eggs / kg cocoons).

A total 501550 dfls of double hybrid, G11 x G19 were distributed to 2907 farmers around the year through RSRS/RECs/DoSs. The data on rearing performance recorded an average cocoon yield of 68.4, 70.6,67.1 and 62.7 kg/100 dfls, respectively in Karnataka, Tamil Nadu, Andhra Pradesh and Maharashtra.

Laboratory Performance of double hybrids

Hybrid	Pupa tion rate (%)	Yield/ 10000 Larvae (Kg)	Cocoon Weight (g)	Shell wt. (g)	Shell (%)	Fila ment Length (m)	Filament size (d)	Reelability (%)	Raw silk (%)	Neatness (p)
G11 × G19	97.6	18.90	1.936	0.436	22.5	1015	2.96	86	17.8	94
FC1 x FC2 (DH1)	94.6	18.43	1.948	0.434	22.3	1020	3.12	85	17.5	94
FC3 x FC4 (DH2)	95.2	19.10	1.950	0.456	23.4	1060	3.14	86	18.5	94
% impr. over DH1	3.17	2.55	-0.62	0.46	0.90	-0.49	5.13	1.18	1.71	0.00
% impr. over DH2	2.52	-1.05	-0.72	-4.39	-3.85	-4.25	5.73	0.00	-3.78	0.00

Performance of On Station Trails at RSRSs (Mean of 6 trials)

G11 × G19	9069	15.5	1.706	0.379	22.2	840	2.54	86	16.1	94
FC1 x FC2 (DH1)	8232	14.3	1.780	0.392	22.0	834	2.65	85	15.9	94
% impr. over DH1	10.16	8.42	-4.17	-3.25	0.87	0.72	-4.34	1.18	1.26	0.0

Field Performance of FCs under Authorization trials (5 crops)

Foundation Cross	Dfls (Nos.)	Yield/ 100 dfls (kg)	Pupa-tion Rate (%)	Cocoon wt. (g)	Shell wt. (g)	Shell (%)
Oval FC G11 (Gen1 x 2C)	2125	81.4	92.4	1.594	0.356	22.3
Dumbbell FC G19 (4D x 4S)	2045	72.2	90.8	1.545	0.342	22.2
Total/Mean	4170	76.8	91.6	1.570	0.349	22.2

Field Performance of G11 x G19

State	Dfls (Nos.)	Farmers (Nos)	Yield/ 100dfls (kg)	Cocoon wt. (g)	Shell wt. (g)	Shell (%)
KA	116050	698	68.43	1.764	0.375	21.29
TN	116800	845	70.61	1.794	0.367	20.44
AP	199800	1018	67.10	1.914	0.395	20.6
MH	68900	346	62.69	1.652	0.362	21.9
Total	501550	2907	67.21	1.781	0.375	21.1