

CROP IMPROVEMENT (From 2013-14 to 2017-18)

a) VARIETIES RELEASED

Cashew hybrid Vengurle-9 for Konkan Region and Variety Jhargram-2 for West Bengal were identified and released.

VENGURLE-9



Vengurle-9 (V-9), a new hybrid was identified and released for Konkan Region

Particulars	Vengurle-9 (V-9)
Year of release	2015
Centre	RFRS, Vengurla
Hybrid/Selection	Hybrid
Parentage	Vengurla-4 X M-10-4
Canopy type	compact
Branching habit	Intensive
Flowering	Nov. to Dec.
Fruiting	February to May
H. Flower	21.46 %
Apple colour	Reddish yellow
Apple weight (g)	72.9
Juice percentage	76.0
Nut weight (g)	8.9
Number of nuts/kg	112.00
Kernel weight	2.1
Shelling percentage	29.5%
Export grade	W210
Mean nut yield/tree	15.98 kg
Special character	Compact canopy, Bold nut with bunch bearing, high yield and export grade kernel

BIDHAN JHARAGRAM-2



Bidhan Jhargram-2 a new hybrid was identified and released for West Bengal

Characters	JGM – 216
Branching Habit	Intensive
Canopy Type	Upright and Compact
Nut Weight	9.28 g
Nuts/Panicle	3.0
Yield/tree	13.50 Kg
Yield /ha (Spacing : 6m X 6m)	25.02 Q
Cumulative Yield/tree (up to 6 th Harvest)	50.90 Kg
Shelling %	31.0
Kernel Weight	2.87 g
Kernel Grade	W180

Efforts made/On-going efforts in crop improvement:

Bapatla

As a result of continuous and systematic evaluation 4 high yielding selections were identified from local germplasm collection and released as BPP-3 (SM 3/3), BPP-4 (EPM 9/8), BPP-5 (T No.1) and BPP-6 (T No.56). Besides these, 4 high yielding hybrids were also released from this station viz., BPP-1 (T No.1x273), BPP-2 (T No.1x273), BPP-8 (T No.1x40) and BPP-9 (T No.56xM.10/4).

Bhubaneswar

Three cashew varieties (1 selection and 2 hybrids) have been developed by the centre viz. Bhubaneswar-1, Jagannatha (BH-6) and Balabhadra (BH-85).

Utilizing germplasm, 2000F₁ hybrids have been developed and planted in the field for evaluation. From the field evaluation 9 promising hybrids have been identified (such as BH-105, B2-32, F4-24, E5-20, B6-27, D6-19, C2-6, E7-2 and E7-6) and are being further evaluated.

Goa

Released a new variety, Goa-1 (Balli-2) and recommended for cultivation in Goa along with improved varieties. Further, Goa Cashew-2 (Tiswadi-3), a new improved bold nut variety was recommended for cultivation in Goa. Two more Promising selections, viz. Ganj-2 (Goa-cashew-3) and KN-2/98 (Goa Cashew-4), have been identified for further recommendation in Goa state.

Hogalagere

Two high yielding varieties Chintamani-1 and Chintamani-2 have been released and H-1608 (Dhana) has been recommended for the region.

The varieties Ullal-1, Ullal-2, Ullal-3, Ullal-4, UN-50, Chintamani-1, Chintamani-2, Dhana, Bhaskara, Vengurla-3, Vengurla-4, Vengurla-7, Vengurla-8, Vengurla-9, Madakkathara-2, Priyanka, H-32/4 have been adopted and recommended for cultivation in Karnataka and Maidan parts.

H-320, H-81, H-188, 191 and 216 of many F₁s screened were found promising. H-320 and NRCC-2 are found to be promising in terms of yield and nut size. Among the F₁ cross combinations H-216 (2/77 Tuni X Vetore-56), H-191 (Ullal-3 X Vetore-56) and H-

188 (Vengurla-5 X Vetore-56) are found to be promising in terms of plant habit, cluster bearing and nut size.

Jagdalpur

The promising entry CARS-10 was released as "Indira Kaju-1" by State Seed Sub-Committee, Govt. of Chhattisgarh in the year 2010. This was found to be tolerant to short spells of low temperature (2 – 2.5°C) at Jagdalpur Centre, which had no leaf shedding as in other collections. Under collection and evaluation program, germplasm NRC-137 and local germplasm CARS-17 were promising with yield of 8.8 and 13.5kg/tree, respectively.

Jhargram

At RRS, Jhargram, 2 varieties have been developed: Jhargram-1, a cashew variety with small nut but highly cluster bearing, high shelling percentage and high yielding type. And Bidhan Jhargram-2, a cashew variety with bold nut, high shelling percentage and high yielding type.

Pilicode

Dwarf type PLD 57 was identified with very short internodes, small leaves, compact canopy and panicles, very early type (flowering in October), low yield – 2 Kg/plant, medium nut weight with 5.8g and shelling percentage of 24%.

Vengurle

The centre has released nine high yielding cashew varieties (Vengurla-1 to Vengurle-9) since 1974, in which, presently cashew varieties viz., Vengurla-1, Vengurla-4,

Vengurla-6, Vengurla-7, Vengurla-8 and Vengurla-9 (Released in 2015) are recommended for commercial cultivation.

The variety Vengurla-8 has demand from farmers of Goa state for making fenny because of big sized apple (100g) and 86% juice recovery and best for cashew apple wine juice content.

Vridhachalam

Four cashew trees indicating possible tolerance to salt water inundation have been identified from Tsunami affected plantations at Cuddalore and Nagapattinam.

Cashew hybrid cultures in pipeline: HC-6 - F₁ hybrid of the cross between VRI 3 X KGN-1. Tree is 3m in height, low spreading, intensive branching habit, 3-5 fruits per cluster, 4-6 kg nut yield per tree which is suitable for high density planting system @ 500-1250 plants per hectare. HC-10 is another F₁ hybrid of the cross between VRI 3 x KK 1, bold nuts 7.4g, more number of fruits per cluster (8-10 fruits per cluster), easy to peel testa. High yield (15 kg nuts/tree at the age of 10 years), Stable yield even during drought years. Three more promising hybrids are a) HC-24 - F₁ hybrid of the cross between VRI 3 x M 33/3, bold nuts(7.8 g). b) HC-25 - F₁ hybrid with more number of nuts/cluster (18 nuts) and c) HC-30 - F₁ hybrid of the cross between VRI 3 x PV-1, better nut size (8.0 g.)