

Achievements:

Mango hybrids released from AES, NAU, Paria:

A total of four mango hybrids were developed and released for the commercial cultivation from Agriculture Experimental Station, Paria, Gujarat, and evaluated for horticultural aspects such as yield, physico-chemical properties, organoleptic testing, etc. and were released for commercial cultivation in Gujarat state. Among these four hybrids, Neelphonso, Neeleshwari and Neeleshan Gujarat were released in the year 1986 while hybrid Sonpari was released in the year 2000. Later on, GAU divided in four independent agricultural universities and A.E.S., Paria came under Navsari Agricultural University. The description of each hybrid is given below.

Sonpari (Alphonso x Baneshan)



The Gujarat Mango Hybrid-1 (GMH-1) was released in the year 2000 from Agriculture Experimental Station, Paria by giving the name Sonpari. This mango hybrid was developed by taking Alphonso as female parent and Baneshan as male parent.

The trees of Sonpari are vigorous in growth, have dense foliage of lanceolate leaves with sub-erect branches which gives the dense round canopy structure. This hybrid should be planted at normal spacing (10 x 10m) but if plantation is in high density use 5 x 5m and remove alternate rows after about 15 years when the canopy touches each other or use annual pruning methods to maintain the canopy architecture.

Sonpari is heavy yielder and regular in bearing. The fruits are obliquely oval in shape like Baneshan, big in size weighing 360–550g. The tree bears fruits singly. Fruit skin is smooth & become golden yellow in colour on ripening. The big sized brown lenticels moderate densely spread on skin give very characteristic look to the fruit. The peel is very thin and do not adhere to pulp. The pulp is firm & fibreless, attractive golden yellow in colour with average pulp content of 75-77%. Taste is excellent and resembles to that of Alphonso and very good for table purpose. The fruit has good blend of sugars and acids which are desirable for consumer preference.

The TSS is more than 19.5% with lower acidity 0.18% and higher total sugars 14.46%. The keeping quality is very good and fruits remain in good condition for more than 10 days at room temperature. The fruits mature in second week of June.

The trees are free from mango malformation, shoot borer and mealy bug. The fruits are free from spongy tissue disorder. The fruit skin is very thin and hence preferred by fruit fly to lay eggs. Therefore, to avoid the fruit fly damage, place Nauroji Fruit Fly Traps @ 15/ ha in the orchard.

Neelphonso (Neelam x Alphonso)



The mango hybrid Neelphonso was released in the year 1986 from AES, NAU, Paria. This mango hybrid was developed by taking Neelam as female parent and Alphonso as male parent. Trees of Neelphonso are oval shaped, moderately in growth with sub erect branches and have dense foliage containing lanceolate leaves.

This hybrid is moderate regular in bearing but have late bearing tendency. Tree bears fruits singly. The fruits ready for the harvest in July-August and when most of the mango variety will be harvested. Due to this, the fruits of Neelphonso get good market price. There is a great potentiality to exploit this hybrid as a source of off-season mango because the fruits from late flushes of flowering ripen even during September when no other mango variety can be seen. The fruit availability period is more than 50-60 days due to multiple flowering flushes.

The oval oblique shaped fruits of Neelphonso are medium in size weighing about 200g. The skin color on ripening becomes apricot yellow while the pulp becomes orange yellow. Due to thick, smooth skin the fruits do not get damaged by rain. The fruits are free from spongy tissue disorder and are moderate resistant against fruit fly. The pulp texture firm, non-fibrous, highly suited for table and juice purpose with excellent keeping quality.

The TSS is more than 21.5% with lower acidity 0.18% and higher total sugars 14.42%.

Neeleshwari (Neelam x Dashehari)



This mango hybrid was released in the year 1986 from AES, Paria. This mango hybrid was developed by taking Neelam as female and Dashehari as male parent. The trees of this hybrid are round shaped with dwarfing nature and sparse foliage containing lanceolate leaves. It bears narrowly oblong shaped fruits moderately and regularly in bunches of two-three fruits. The fruits are free from spongy tissue disorder.

Medium weighing fruit size about 228g with prominent sinus. The skin color on ripening turns apricot yellow while pulp colour becomes yellow. The thin smooth skin adheres to moderately firm textured flesh. The non-fibrous juicy pulp suited for table as well as juice purpose and has moderate keeping quality.

The TSS is more than 19.00% with moderate acidity 0.21% and higher total sugars 13.90%.

Neeleshan Gujarat (Neelam x Baneshan)



This mango hybrid was released in the year 1986 from AES, Paria. This mango hybrid was developed by taking Neelam as female and Baneshan as male parent. The trees of this hybrid are spherical or dome shaped, sub-erect to spreading branches and moderate vigorous in growth with dense foliage containing oblong leaves. It bears attractive obovoid shaped fruits heavily and regularly. Generally, the fruit bears singly or in bunch of two. The lenticels on skin are moderate dense. The fruits are free from spongy tissue disorder.

The average weight of fruits is about 318g with higher pulp content of 76%. On ripening the skin become cadmium yellow while the pulp becomes attractive golden yellow in colour. The fruit skin is thin, smooth, moderate adhering to pulp with firm non-fibrous texture. Fruit TSS is 16-17% with moderate acidity 0.21% and total sugars 13.09%. The fruits are suited for table purpose and have very good keeping quality of more than 10 days after ripening.

(b) Endorsement and release of mango varieties

Kesar, Totapuri and Vashibadami have been endorsed and released for higher and regular yield with good economic return under rainfed conditions.

(c) A total of 57 recommendations have been made for the farmers, orchardist and scientists.