

Mahatma Phule Krishi Vidyapeeth, Rahuri, Maharashtra, India

A short note on a mutation of Cheema-sahebi (Syn. Selection-7)

by

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Kurze Mitteilung über eine Mutante von Cheema-sahebi (Syn. Selection-7)

Zusammenfassung. — Die Trauben- und Beerenmerkmale einer spontan entstandenen Knospenmutante der Tafeltraubensorte Cheema-sahebi werden beschrieben. Die Beeren der Mutante sind gegenüber der Ausgangsform auffällig verlängert. Während diese bei Verpackung und Transport 8—10% ihrer Beeren verliert, zeichnet sich die Mutante durch eine hohe Haftfestigkeit ihrer Beeren aus.

As early as 1928, attempts were made to evolve a superior grape variety for the Deccan region of Bombay State (India). Introductions from the United States, France and other countries proved unsuitable for the Deccan region. According to PHADNIS *et al.* (1968) CHEEMA (1928) attempted to breed superior varieties from the indigenous types. Pandhari-sahebi was one of the best adapted table varieties, but did not achieve commercial popularity because of poor cropping. The poor cropping of Pandhari-sahebi was reported to be due to self-sterility. CHEEMA raised a large

Table 1

Analysis of the Cheema-sahebi and the mutant Cheema-sahebi
Meßwerte bei Cheema-sahebi und ihrer Mutante

Sr. No.	Character	Cheema-sahebi	Mutant
1.	Weight of cluster	1.118 kg	1.100 kg
2.	No. of berries in cluster	264	230
3.	Wt. of all berries on cluster	1.068 kg	1.048 kg
4.	Wt. of 100 berries	0.395 kg	0.458 kg
5.	Volume of 100 berries	360 ml	430 ml
6.	Wt. of juice of 100 berries	0.308 kg	0.333 kg
7.	Volume of juice of 100 berries	290 ml	320 ml
8.	No. of seeds from 100 berries	168	144
9.	Wt. of seed from 100 berries	8.7 g	6.0 g
10.	Wt. of skins of 100 berries	48.0 g	85.3 g
11.	Mean length of berry	2.3 cm	3.4 cm
12.	Mean diameter of berry	1.5 cm	1.5 cm
13.	Percentage acidity	0.68%	0.78%
14.	Percentage of reducing sugars	14.5%	13.5%
15.	Percentage of total sugars	15.7%	15.2%
16.	Total soluble solids	16.5%	16.0%

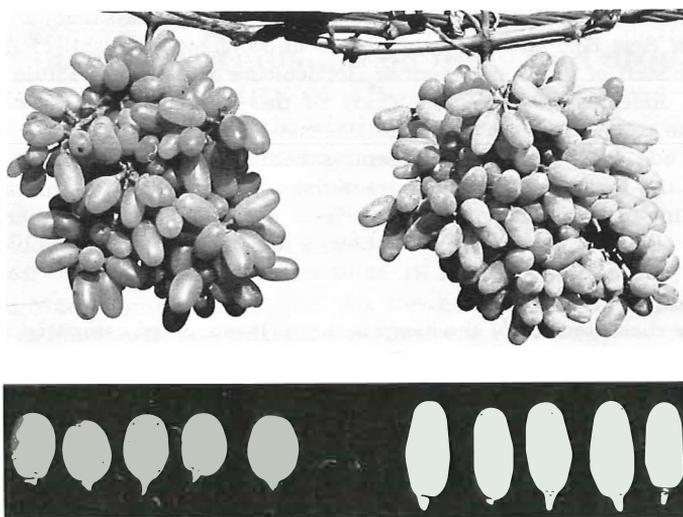


Fig. 1: The bunch of Cheema-sahebi (left) and budspore of Cheema-sahebi (right).
Traube von „Cheema-sahebi“ (links) und einer Knospenmutation von „Cheema-sahebi“
(rechts).

Fig. 2: Berries of Cheema-sahebi (left) and budspore of Cheema-sahebi (right).
Beeren von „Cheema-sahebi“ (links) und einer Knospenmutation von „Cheema-sahebi“
(rechts).

number of seedlings of the Pandhari-sahebi to select an improved variety. He studied 64 seedlings and from these selected No. 7 and No. 94. No. 94 showed prolific bearing and was tested for its yield. It was superior to Bhokari, the main commercial variety at the time. Cheema-sahebi remained unnoticed until it was tried by the late R.B.G.G. SHEMBEKAR. This variety produced bumper crops for SHEMBEKAR, and the variety rapidly spread to the other grape growing areas of the State. Today it is one of the most important commercial varieties in the State.

JOSHI (1961) gives a brief description of Cheema-sahebi:

The vine is vigorous growing, canes medium long, thick, light brown with deep brown streaks. Nodes are enlarged and angular; internodes medium long, thick, rounded. Tendrils are intermittent, long, smooth and bifurcated. Mature leaf large, cuneiform, sometimes brittle, upper surface dark green, glabrous; under surface light green, glabrous; five lobes, terminal lobe obtuse, petiolar sinus very narrow, basal sinus shallow and wide, lateral sinus shallow to medium deep, closed, at times perforated; margin dentate, teeth obtuse. Petiole green but purplish at insertion, inserted obliquely.

Flowers hermaphrodite, fertile; cluster large, usually conical, well-filled, weighing not more than one pound on an average. Length 20 cm, width 10—15 cm, peduncle short and tough, bunches numerous. Berries: large, oval cylindrical, pale yellow with moderate bloom. Skin thin and crisp. Adherence of pulp to the skin is strong. The pulp is crisp, sweet and superior in quality to other commercially grown varieties.

Cheema-sahebi, though superior in all respects to the existing commercial varieties of the State, has certain defects. The attachment of the berry is weak. During packing and transport there is heavy berry-shedding. About 8 to 10 percent of the berries are detached during various stages of handling.

Very recently a bud-sport has been noticed in Cheema-sahebi in one of the vineyards of Shri Kadlag of Jawale village in Sangamner tehshil of Ahmednagar district. The staff of the Department of Horticulture of Mahatma Phule Agriculture University, undertook the detailed study of this bud-sport and it was observed that in some respects it is superior to Cheema-sahebi. The physico-chemical analysis of the bud-sport and parent Cheema-sahebi is given in Table 1.

One of the most outstanding characteristics observed in this mutation is less berry shedding. The attachment of the berries is strong and percent of berry shedding during various stages of handling has been found negligible. In Bombay market a box of 4 kgs brings an average of Rs. 18-00 as compared to Rs. 16-00 from Cheema-sahebi.

Another characteristic of the berry is that it is elongated compared to the berry of Cheema-sahebi (Table 1, Fig. 1, 2).

Thus, this mutation holds great promise as a commercial variety of the State. The Department of Horticulture of Mahatma Phule Agriculture University is carrying further research on this budsport regarding pruning, manuring, and other cultural aspects.

References

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