

INDIAN Horticulture

September-October 2011



In this issue:

450+ grapes
Growing tomato the safe way
Tapping potential of seabuckthorn
Wild fruits in Uttarakhand

Cover : Tapping potential of Seabuckthorn
Courtesy : Dr V.K Yadav et al.

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Thar Manak to quench thirst in desert

The Thar Manak is a new variety of mateera. It is improved potential variety for the desert region, providing 50-80 tonnes/ha of fruits. The formers are getting more return by cultivating this variety.

MATEERA is an indigenous type of watermelon (*Citrullus lanatus*), tolerating high temperature and drought conditions. It is extensively grown in arid region of north-western India. Mouth appeal of mateera fruits is attributed to sweet and refreshing edible flesh (pulp). The quality of fruit (sweetness, firmness and colour) is important aspect of consumers' preference and its wider acceptability.

Two varieties, AHW-19 and AHW-65, were developed and released in 1998. These recommended varieties have now been widely adopted by growers for commercial cultivation in arid region. However, these varieties have some limitations like medium sweetness and less eye appealing flesh quality. Therefore, intensive hybridization (mateera with watermelon) work was undertaken in 1998 to overcome these problems and at the same time retain the drought

hardy characters. In F_6 generation, some progenies of cross combination, Mateera AHW 19 \times Sugar Baby, showed desirable characters for which this hybridization work was initiated. The new high-yielding variety is devoid of fruit cracking and produces high quality fruits under extremes of arid conditions. It was released in 2007 under the name Thar Manak at the Institute level for commercial cultivation.

Mateera Thar Manak

Its fruits weighing 2.65-4.21 kg are ready for first marketable harvesting 70-80 days after sowing. On an average, number of marketable fruits ranges from 2.59 to 4.22 per plant. Yield potential is 10-14 kg/plant. The variety is much suitable for cultivation both as a summer and rainy seasons with a marketable fruit yield of 50 - 80 tonnes/ha. The fruits are free from cracking

Table 1. The performance of watermelon varieties (average of summer and rainy season of two years)

Character	Parental varieties		New variety
	Mateera AHW-19	Sugar Baby	Thar Manak
Days to first female flower (DAS)	44.5	55.2	38.5
Node number to first female flower	7.1	14.2	12.7
Days to first harvest (DAS)	76.5	97.5	75.5
Number of marketable fruits/plant	4.29	1.14	3.45
Marketable fruit yield per plant	16.54	3.22	12.15
Fruit weight (kg)	3.85	2.83	3.25
Fruit length (cm)	35.5	24.1	22.5
Fruit girth (cm)	58.8	60.2	58.5
Edible flesh thickness (cm)	13.4	15.1	16.8
Non edible flesh thickness (cm)	1.95	1.51	1.61
TSS ($^{\circ}$ Brix)	8.12	10.15	10.82
Fruit character	Oblong, dark green-green clear stripes; no fruit cracking	Round, green to dark green non stripes rind; severe fruit cracking	Oblong-round, dark green-green clear strips on rind; no fruit cracking
Flesh character	Pink, B-grade	Red, A-grade	Red, A-grade
Seed character	High seed content, medium sized and khaki colour	High seed content, small sized and mottled brown	Low seed content, very big sized and blackish

under extremes of high temperature and aridity conditions in summers. The fruits are oblong round having dark green green stripes on the smooth rind. The fruit is 20–22 cm in length and 5.8–6.2 cm in girth. In a fruit, edible and non edible flesh thickness is 14.2–16.5 cm and 1.35–1.62 cm, respectively. The flesh is red, solid (firm) and granular and has good taste and sweetness (9.5–11.2 % TSS). The seeds are very big, bold and blackish in colour. Low in seed content and the number of seeds in a fruit ranges from 160 to 266.

Its plants are medium in growth habit having an average vine length of 2.65 to 3.12 m with 5.2–6.5 branches. The internodal length is 6.2 to 8.8 cm. In general, the opening of first male and female flower starts after 30–35 and 35–38 days of sowing. Green to dark green leaves of medium size is 15.2 to 22.4 cm in length and 12.8 to 17.8 cm in width. The length of leaf stalk is 7.5–8.8 cm. The fruit peduncle length is 2.2–4.2 cm.

Its Cultivation

In hot arid region, watermelon can be grown as a summer and rainy season crop. So far, no improved technology is recommended for cultivation under abiotic stresses and limited irrigation water in the region. Onset of the monsoon or July is the ideal sowing time for rainy and February for summer season crop. In thoroughly prepared fields, channels or light furrows should be prepared for crop cultivation under limited irrigation water either through flood in channels or drip technology.

Channels of 60–75 cm width are prepared 2.0 m apart, which are of about 25 m in length. Channels in

a hectare area should be fertilized with FYM (50 q), vermincompost (5 q), DAP (100 kg), SSP (100 kg), urea (50 kg), MOP (50 kg) and 10 kg methyl parathion (2 % dust) as a basal dose and mixed thoroughly. Channels

should be kept ready so that sowing can be done in time with the onset of monsoon in July. About two kg seed is sufficient for a hectare crop. Seeds should be soaked in water 5–6 hours prior to sowing and also treated with fungicide.

Two–three seeds are sown at 50 cm distance in the channels or near to the drippers of lateral lines under drip system. After germination, one or two plants are allowed on each sowing points. The crop should be irrigated at 6–8 days intervals by flood method only in the channels or at 3–4 days intervals for 1–2 hours under drip technology (laterals 14–16 mm and emitters 4 lph capacity) under sandy soils of arid agroclimate.

Two manual weeding and hoeing should be done after 25–30 and 40–45 days of sowing in channels and at this time also apply urea (50 kg/ha) in two split doses in the standing crop. Weeds between the channels may be controlled by cultivating the area by power tiller or with spades manually. Spraying of insecticides like rogor, malathion or

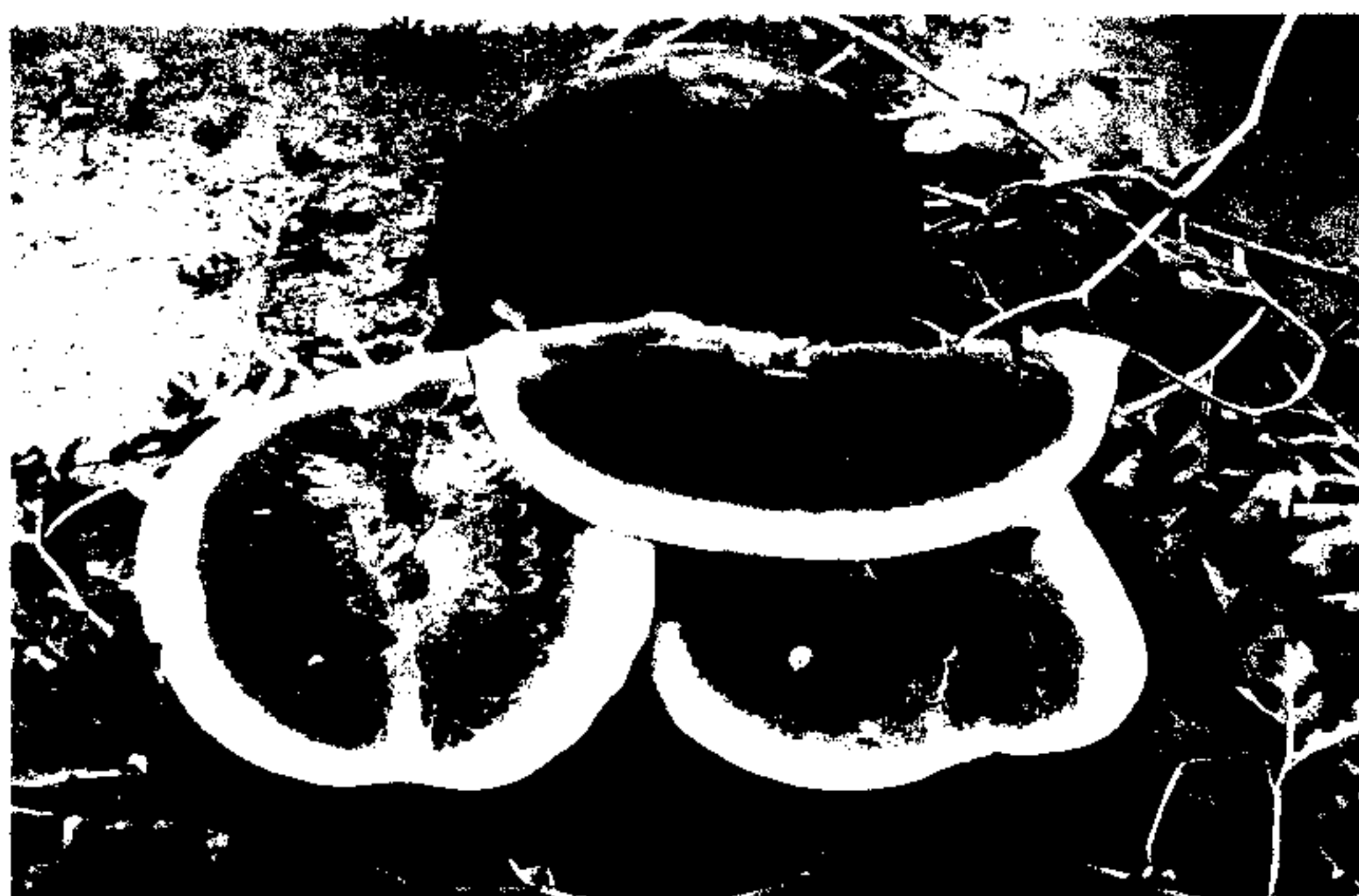
endosulfan (@ 1.0–1.5 ml/litre of water) is recommended to control aphids and other minor insect pests at early plant growth and flowering stages.

For further interaction, please write to:

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Meteera Thar Manak in bearing stage



Fruits of mateera Thar Manak ready for marketing