

# New bottle gourd: Thar Samridhi

**Thar Samridhi is a new bottle gourd variety. It is better in yield and allied characters than the hitherto-grown popular bottle gourds.**

**B**OTTLE gourd is popularly grown vegetable from March to December by adjusting planting schedule under arid conditions. The fruit yield and quality of available varieties, however, are very low under high day temperature (38–40°C from March to October), high vapour pressure deficit (25–30 mb), and low and erratic rainfall (250–500 mm) which usually remains confined in 9–21 days during July–September. Thar Samridhi (AHLS Round 1) has, therefore, been developed and recommended for commercial cultivation.

## Thar Samridhi

Thar Samridhi has been derived from segregating  $F_2$  population of a cross combination, Banswara Local -1 × Gujarat Local-1. It is uniform, high-yielding and early. Its vines are medium in growth habit, attaining an average length of 2.42–3.65 m and 5.5–6.2 branches. The leaves are medium-sized (15–18 cm in length and 19–23 cm in width). The first male flower anthesis is after 40–43 days on 10–13 nodal position and first female flower appears on 12–14 nodal position 46–49 days after sowing. The fruit picking starts 50–55 days after sowing.

The fruits are attractive, oblate-round, weighing 450–750 g each. Tender fruits of 'A' grade in 9–11 days after fruit setting (weighing 400–500 g, 12–14 cm in length and 28–30 cm in girth) can be harvested on alternate day. The tender fruits shining light green in colour have sparse pubescence. The internal fruit flesh is white and solid. On an average, its yield is 4.83–5.78 kg/plant, and 240–300q/ha. Flowering and fruiting performance are given in Table 1.

## Its Cultivation

The field should be prepared by 2–3 cross ploughing/harrowing. Well-decomposed farmyard manure should be applied @ 200 q/ha prior to last harrowing, followed by planking to smoothen the field for preparation of 60 cm wide channels or deep furrows 2 m apart. A basal dose of nitrogen, phosphorus and potash @ 40 kg/ha each is applied along with 5–10 q/ha vermicompost or fine well-rotten FYM prior to smoothening of channels. Seed rate of 2–3 kg/ha is sufficient.

The seeds should be soaked overnight in water

Table 1. Flowering and fruiting behaviour of Thar Samridhi (average of 3 years)

Character	Summer season	Rainy season
Days to first male flower anthesis	43.80	40.50
Days to first female flower anthesis	48.50	46.70
Days to first marketable harvesting	58.40	51.50
Vine length (m)	2.29–3.75	2.62–3.25
Number of branches/plant	5.20–6.10	5.50–6.20
Average number of marketable fruits/plant	6.20–8.50	9.80–14.40
Average marketable yield/plant (kg)	3.82–4.15	5.85–7.42
Effective number of harvesting (days)	50–60	90–100
Sowing time	Mid-February	July

containing fungicide like Bavistin or Captan @ 2–3 g/litre. Two to three seeds should be sown at 50 cm distance along the channels on inner right side. Light irrigation must be done immediately after sowing by allowing the water to flow only in channels. Seeds germinate within 5–7 days. Thinning out of extra plants is done 20–25 days after sowing. Irrigation is given at 4–5 days interval in summer season and at 7–8 days interval in *kharif* season. While irrigating, care should be taken to see that water does not flood the vine-spread area between channels but runs only in channels. About 80 kg urea may be topdressed in 2–3 split doses 30, 45 and 60 days after sowing, i.e. at vine spread, induction of flowering and at first harvesting.

Weeding and hoeing twice must be done. There is no serious disease or insect pest problem under arid environment. Sometimes, young plants are infested with epilachna and red pumpkin beetles. Light sprays of Dimethoate or Sevin @ 2 g/litre are effective to control these insect pests. Dusting of Methyl parathion (2% dust) along with wood ash (in a 1:50 ratio) at 2–4-leaf stage of crop growth during early morning hours is most effective to manage beetles.

For further interaction, please write to:

Dr D.K. Samadia (Scientist) and Dr T.A. More (Director), Central Institute for Arid Horticulture, Bikaner 334 006 (Rajasthan).