AgriCos e-Newsletter
ISSN: 2582-7049
AgriCos e-Newsletter
Open Access Multidisciplinary Monthly Online Magazine
Volume: 03 Issue: 11 November 2022 Article No: 11

Quality Seed Production of Sponge gourd (*Luffa cylindrica* L.)

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SUMMARY

Sponge gourd (*Luffa cylindrica*) as reinforcement in resin matrix composite substances is evaluated. The morphology of the fibrous vascular gadget of Luffa's fruit is offered, and the benefits of using this natural mat cloth are highlighted. The use of untreated Luffa does not now increase the mechanical properties of the bare resin. However, its incorporation produces an exchange in the fracture mode of the composites from an abrupt one to a managed and more secure one. This result and the values acquired from mechanical checks show that, without any surface treatment. Luffa already has an excessive potential for use as a center fabric in hybrid composites.

INTRODUCTION

The sponge gourd [*Luffa cylindrica* (Roem.) L.] is an important cucurbit vegetable grown on the Asian continent. It belongs to the family Cucurbitaceae. In India, it's widely cultivated, and you can find it developing at almost every roof pinnacle or outdoor structure in the rural areas. Sponge gourd is grown for its fleshy, immature, non-bitter end result and natural sponge, which is mostly eaten as cooked vegetable curries. Early and total yield were the main breeding goals. In India, aside from stepped-forward sponge many landraces are also being grown for exceptional components having wide variants in form, size, colour, and maturity. The landraces are grown by way of farmers the usage of their personal saved seeds. The Luffa genotypes are of diverse flowering habits, i.e., monoecious and tri monoecious, andromonoecious, gynoecious, and hermaphrodite (Singh *et al*., 2004). The incidence of gynoecism in sponge gourd is uncommon, although populations with excessive proportions of pistillate flowers were developed and utilized for hybrid development (Qinghua *et al*., 1996; Jianning, 2000). In this paper, we discuss the development of sponge gourd (*Luffa cylindrica* (Roem.) L.) populations with a high percentage of pistillate plant life and improved agronomic performance.

Figure-1 Sponge gourd

Variety:
Varieties of sponge gourd with rate, required spacing and features are mentioned below:

Variety	Rate	Spacing	Features
Kashi Rakshita	3.5 kg/ha	Row to row: 3.5cm Plant to plant: 75cm	Resistant to Mosaic Virus, fruit colour is dark green.
Kashi Shreya	3.5kg/ha	Row to row: 3.5cm Plant to plant: 75cm	Resistant to downy mildew, suitable for river bed cultivation.
Kashi Divya	3.5-4.0kg/ha	Row to row: 3.5cm Plant to plant: 75cm	Cylindrical fruit, high yield potential, suitable for distant marketing, successful in summer and rainy season.
Kashi Saumya F_1 Hybrid	3.5kg/ha	Row to row: 3.5cm Plant to plant: 75cm	Medium maturing hybrid, dark green fruit, resistant to Sponge Gourd Mosaic.

Crop husbandry
Selection of variety: Range is now primarily advocated for regions or zones of cultivation, and with high ability yields, recuperation must be chosen for multiplication. Records on *Luffa cylindrica* varieties launched at the ICAR-Indian Agricultural Studies Institute, New Delhi.
Time of Sowing - The seeds are sown two times inside the year. the right time for sowing is inside the month of mid-February to March and second time within the month of mid-may additionally to July.
Isolation distance: Sponge gourd is a cross-pollinated crop, so producing good seed necessitates a thousand-meter separation distance between varieties to avoid unwanted cross-fertilization.
Sowing Time: It is particularly dependent on the winning weather conditions and the length of the types.
Seed treatment- Scrape the seed coat of the seed with a filer, then soak the seeds in water for twenty-four hours for better viability and a higher germination percentage.

Field Preparation
- The pH of the soil should be between 5.5 and 6.5.
- Although cultivation of sponge gourd can take place in all kinds of soils, the soil should have good moisture-keeping capability, especially in the summer time.
- Soil ought to be wealthy in organic matter.
- Sandy loam soil is relatively good for the cultivation of sponge gourd.

Weed control- To make the sector weed-free, mulching and then weedicides are essential. Practice Pendimethalin at 1 ltr/acre or Fluchloralin at 800 ml/acre as a pre-emergence herbicide.

Seed Production - Keep an isolation distance of 1,000 meters from different forms of sponge gourd. Remove diseased flowers from the field. An appropriate time for developing the seed crop is in the months of February and March because harvesting seeds will be less complicated throughout the dry month. For seed production, the culmination are harvested when they get physiologically mature. After harvesting seeds are taken out form pulp, then they're packed and are saved.

Harvesting - vegetation are prepared for harvesting after 70-80 days of sowing. carry out choosing on the c program language period of three-four days. harvesting of soft and medium-sized fruits must be completed. It gives a mean yield of sixty six-eighty three qtl in step with acre.

CONCLUSION
Sponge is fast becoming an indispensable crop because of its very extensive industrial uses. Within the context of morphosynthesis, the capability of replication of the loofa sponge opens the opportunity for the use of biodiversity in obtaining new substances. An effort is being made to bring the possibility of harnessing, changing, and recycling waste seeds from edible fruits and those considered weeds (non-edible ones), such as L. cylindrica,

closer to industrial, home, or technological resources. Loofa sponge is a suitable herbal matrix for immobilization of microorganisms and has been a hit in the biosorption of heavy metals from wastewater. This emerging coin crop will improve the economies of many international locations within the nearest future due to its severe potential**.**

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