

## Different Grades of Tapioca Sago and Their Production Process



Sago is a processed, easily digestible starch, rich in carbohydrates, and available in the form of globules or pearls, typically measuring 2-4.5 mm in size. There are two main types of sago:

- 1. Roasted or Commercial sago
- 2. Steamed/Boiled or Nylon sago

The classification of sago is based on the heat treatment applied after sizing the sago globules. Different commercial grades of roasted sago are special sago (CS), best sago (CB) and milky white sago (CM). Steamed sago is commercially available in two grades viz., nylon sago [Ceylon (NC)] and Pearl sago (NP). The photographs of the different grades of sago are given below:



Figure 1. Different commercial grades of sago. (a-c) Roasted (commercial) sago.(a) Special (CS), (b) Best (CB) and (c) Milky white (CM) sago(d-e) Steamed (Nylon sago) (d) Ceylon (NC) and (e) Pearl sago (NP)

## Comparison of roasted (commercial) and steamed (nylon) sago

- Roasted sago retains its size and shape due to partial gelatinization, whereas nylon sago loses its uniformity due to complete gelatinization.
- Roasted sago is opaquewhereas nylon sago has a glassy appearance and is more transparent
- Roasted sago has a natural white colour, similar to milk while nylon sago has a glowing, transparent cream-yellow colour.
- The degree of gelatinization affects solubility, with nylon sago generally having a higher swelling power than commercial sago.ensuring enough soil moisture at the time of application

The commercial sago, made through a roasting process, is characterized by its uniform colour, size and shape (Figure 1 a-c). It complies with the specifications notified by FSSAI through the Gazette notification (Part III-Sec 4) dated 24 October 2017. In contrast, Nylon sago, produced using a steaming process, typically has an off-white colour and non-uniform size and shape (Figure 1 d and e). Currently, FSSAI standards are available only for the roasted (commercial) sago.

The detailed flowchart outlining the unit operations for commercial sago production for both the roasted sago and the Steamed sago, are provided below.



Flowchart showing the production of (a) Roasted sago and (b) Steamed (Nylon) sago

May 2025

## Technical Leaflet: TL - 9/2025 Different grades of tapioca sago and their production process

By

Krishnakumar T., Jyothi A.N., Sajeev M.S.





(भारतीय कृषि अनुसंधान परिषद) श्रीकार्यम, तिरूवनन्तपुरम 695 017, केरल, भारत

ICAR-Central Tuber Crops Research Institute (Indian Council of Agricultural Research) Sreekariyam, Thiruvananthapuram-695 017, Kerala, India केकफअसं CTCRI

**Published by** 

G. Byju Director

Tel. No. : 91 (471)-2598551 to 2598554; E-mail: director.ctcri@icar.gov.in, Website: https://www.ctcri.org