

TECHNICAL SHEET

Tomato puree (TAP-PT)

Presentation of the tomato

The tomato (*Solanum lycopersicum* L.) is a species of herbaceous plant in the *Solanaceae* family. It is an annual plant, although it is possible to harvest the same tomato plant during several years. If not pruned, the tomato is a bushy plant that can reach more than 2 m in height. The tomato requires a temperature difference between day and night of 6 to 10°C to produce a maximum of fruits. The optimal temperature during the day is 25°C and 17°C at night, but when temperatures exceed 30°C fruiting is difficult and stops when they exceed 35°C. In addition, the tissues of the plant are likely to be damaged if the temperature exceeds 38 °C or if it falls below 10 °C. There are varieties adapted to the hot and humid tropical climate, these varieties should be favored in your varietal choice for growing tomatoes in French Polynesia. (DAG, 2018)

There are two main types of plant growth: - **Determinate**: after emitting 2 to 8 clusters, the terminal bud becomes a floral bud. The axillary buds stop after 1 to 3 clusters, giving the plant a bushy habit. The industrial varieties and the varieties developed by the CDH belong to this group. - **Indeterminate**: there is no stop of growth of the main stem. Axillary buds must be removed to ensure good production. Staking is required to support the plant. (ISRA, 2012)

life cycle of the tomato

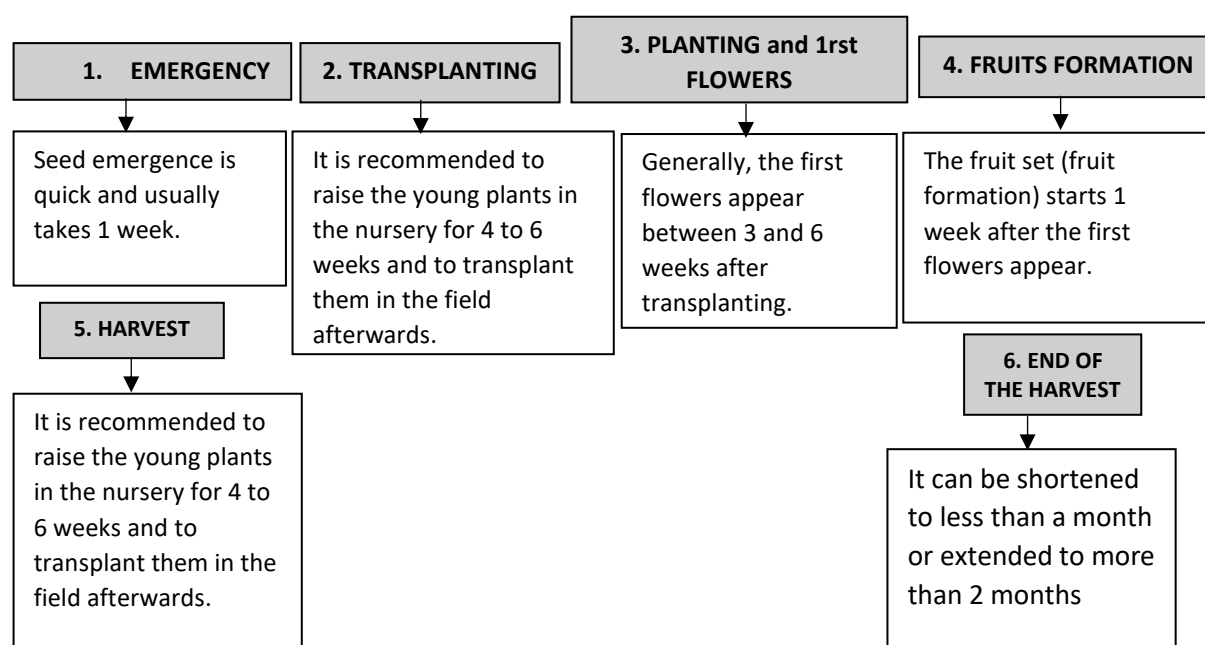


Figure 1: life cycle of the tomato (source : DAG, 2018)

Structure of the tomato

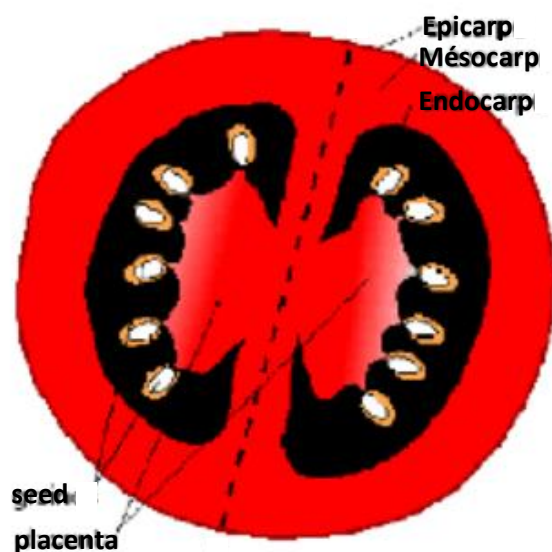


Figure 2: Cross section of a tomato (source : AHISHAKIYE et AITAMOUR, 2010)

Characteristics of the technology

Tomato Puree is a preserved food obtained by the partial dehydration of the grind of washed and seedless tomato fruits. It is a semi-liquid product with a final dry matter of 11 to 12%. Color: bright red, Nutritional composition: vitamin C (22.4 mg/100g); β -carotene: 136.9 μ g.

Acquisition cost of the technology

The equipment/materials needed to produce tomato paste are estimated at 1,758,690 FCFA. The amortization period of the equipment varies between one (01) year and five (05) years.

Economic profitability of the technology

For 230kg of processed tomato fruit, the financial profitability of tomato puree production is 51.21%.

Bibliographic references

DAG (2018) : Fiche technique : La tomate - *Solanum lycopersicum* L. ; Direction de l'Agriculture ; Polynésie française ; 12p.

ISRA (2012) : Techniques de production de semences de tomate au Sénégal ; RADHORT PUBLICATION ; 19p.

AHISHAKIYE et AITAMOUR (2010) : Valorisation de résidus de transformation industrielle de tomate : extraction et caractérisation de l'huile de graines de tomates ; projet de fin d'étude ; Université Saad-Dahlab de Blida ; Faculté des Sciences Agro-vétérinaires/Département des Sciences Agronomiques.

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Other references

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