TECHNICAL SHEET

Production of dried mango

Presentation of mango

The mango tree belongs to the Anacardiaceae family, of the Mangifera L. genus, which includes 60 tree species. One of them, Mangifera indica, is said to include 1,000 varieties and more than 70 cultivars (grafting) present on various continents (Rivier et al, 2009).

The **fruit** is fleshy with a smooth and thin skin, quite resistant. At maturity, the fruit can be green, yellow more or less spotted with green, red, or purple depending on the variety (PAFASP, 2017).

The **stone**, rather large and flattened contains a single seed (4 to 7 cm long by 3 to 4 cm wide and 1 cm thick) adhering to the flesh. It is covered with fibers more or less developed in the flesh according to the varieties. Its shape can be round, oval or kidney-shaped. (PAFASP, 2017).

Its flesh unctuous, juicy, sweet and fragrant depending on the variety (PAFASP, 2017).

In Burkina, for the moment among all the known varieties of mango, we can cite the varieties Amélie (or Governor), Brooks (commonly called "late mango"), Kent and Lipens which are dried (PAFASP, 2017).

Mango and his different parts

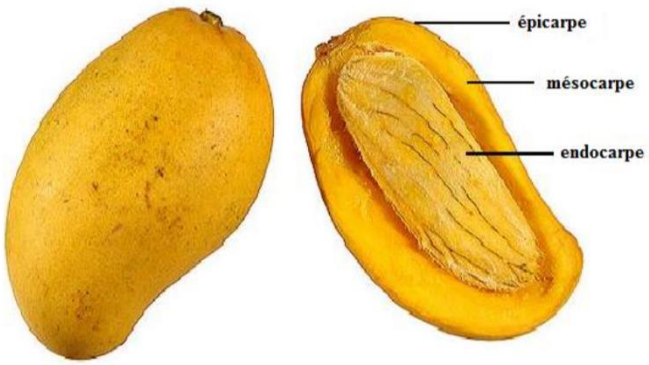

Figure 1 : longitudinal section of the mango (source : Kasse, 2015)

Some technologies for drying mango (PAFASP 2017)

- The gas dryer ATESTA
- The gas dryer ATESTA amélioré
- The dryer tunnel sud-africain

Principles of drying

The **drying** of mango is to eliminate by gradual and partial evaporation of water constitution of the fruit by the combined action of air and heat while keeping its organoleptic qualities and microbiological stability: a heat transfer and a water transfer are observed.

The **heat transfer** includes the external transfer (heat is transferred by convection and by conduction from the air to the surface of the product to be dried) and the internal transfer (the heat transfer inside the product is done by conduction. The heat diffuses into the product due to temperature differences).

The **transfer of water** also takes place in two forms: the internal transfer (it corresponds to the migration of water from the inside of the product to its surface) and the external transfer (it corresponds to the elimination of water vapor on the surface of the product by diffusion).

Mango drying process

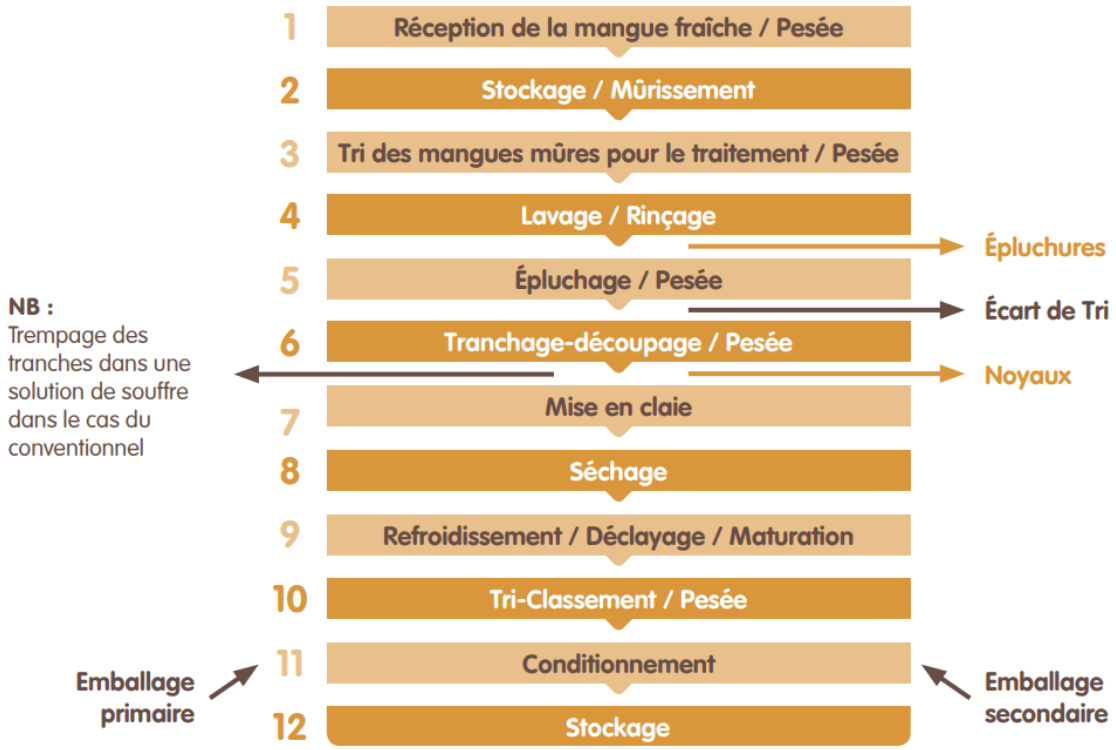

Figure 1 : drying process of the mango (PAFASP, 2017)

Characteristics of the technology

Mango exports in the sub-region

Bibliographic references

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Other references

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