

Post Harvest Processing Methods and Physiological Alterations in the Coffee Fruit

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METHODS OF COFFEE PROCESSING

It is well known that the way the coffee fruits are processed has pronounced effects on the final quality of the beverage. Basically there are two methods to process coffee fruits, the dry and the wet methods (Clarke, 1985; Vincent, 1985).

In the dry method the coffee fruits brought from the field are laid out in drying patios to be exposed to the sun until they reach 10-12% humidity. Drying machines are also used to dry the coffee fruits. In both cases some classification may be undertaken before drying. The dried product, also known as Natural Coffee, may be dehusked or not before storage.

The wet processing method produces coffee of better quality than the dry method (Clarke, 1985; Vincent, 1985). This coffee is known as Washed Coffee. The fruits from the field are pulped and allowed to ferment for the elimination of the mucilage. In the pulping stage the exocarp is removed exposing the mesocarp (mucilage), which adheres to the endocarp. The fermentation process may be carried out by keeping the pulped fruits in water or not. Depending on the local climate (temperature) the fermentation period has to be controlled to avoid over-fermentation, which may decrease the quality of the beans and consequently the beverage quality. Fermentation for 16 h has been used for places where Robusta is cultivated (warmer regions), increasing to 48h for higher altitude locations (Vincent, 1985) or even to 80 h (Clarke, 1985). After fermentation, the remaining mucilage adhering to the endocarp is removed manually or mechanically, or also by leaving the coffee in running water for 6 to 16h. Then the beans are dried to 10-12% humidity, which occurs in a shorter time than for the dry process, usually in a week under favorable climate conditions. Washed coffees have less body, higher acidity and they are more aromatic than the Natural coffees.

There were indications that Natural and Washed coffees present differences in some typical compounds, which are important for the development of the beverage quality (Menezes and Clifford, 1987; Menezes, 1994; Balyaya and Clifford, 1995). Therefore, assuming that this is not a result of microbe action, one may argue that such alterations are the consequence of seed metabolism.