

Title The influence of processing systems on the flavour of Australian coffee
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Abstract

A research trial is being conducted in conjunction with the Australian Coffee Grower's to determine the influence of various processing techniques on the flavour profile of Australian coffee. Techniques include pulping, mucilage removal (fermentation, mechanical), the amount of mucilage removed (none, partial, complete) and the effect of dry processing. Samples from each process were collected, hulled, size graded and sent to a number of professional tasters for evaluation. Samples were described using the Australasian specialty coffee association assessment criteria for aroma, acidity, body, flavour and after-taste. Results indicated that the processing style has a large influence on the quality and flavour of coffee. Green bean colour was best where the mucilage was completely removed by fermentation; the next best was where mucilage had been removed mechanically and the poorest was where mucilage was allowed to dry around the parchment, especially in unpulped fruit. Cupping evaluations indicated that samples pulped, but not fermented, consistently scored well with bold acidity, sweet fruity flavours, good body and aroma. As the level of fermentation increased, quality declined with a decrease in the acidity and body and an increase in astringency and off tastes, indicating the importance of not over-fermenting during processing. Red fruit dried in their skins with no pulping produced the poorest quality coffee attributed to the extended fermentation during the drying process. Samples were described as over-fermented, astringent, defective, sour, bitter and over-ripe. When fruit was allowed to over-mature on the trees, over-fermentation and resulting poor quality of red fruit was avoided and quality was greatly improved. Mechanically removing the mucilage rather than by fermentation generally resulted in very good quality. However, if all the mucilage was not removed and some fermentation occurred or the parchment was damaged, as occurred in the samples processed using a demucilager, quality was reduced. The presence or removal of mucilage around the parchment, and the amount of fermentation that takes place, are the biggest contributors to coffee quality during processing.