Variations in Coffee Processing and Their Impact on Quality and Consistency

Daniels, Noah
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Michigan Technological University – Forestry

Arabica coffee is the primary cash crop for many farmers in the mountains of Panama. Virtually all of the production from the provinces of Veraguas and Coclé is consumed within Panama. Since the export market pays significantly higher prices, many coffee farmers are interested in producing coffee of sufficient quality for this market. Inconsistencies and poor practices during processing and drying of coffee were noted during the 2006 harvest in a coffee producing area in the highlands of the province of Veraguas. Since coffee quality depends on environmental conditions, cultivar, careful processing, and sufficient drying, these inconsistencies may disqualify a product with potential for export.

During the 2007 harvest, experiments varying the fermentation time and final moisture content of dried coffee were conducted. Forty-five samples representing five samples each of three categories of fermentation times and three categories of degree of drying in nine possible combinations were prepared and cupped. Cupping, the blind, objective evaluation of coffee quality based on aroma and taste, was done by two technicians at the Café Ruiz coffee cupping laboratory. The scores were analyzed to look for statistically significant differences.

Well-processed samples scored higher in most cupping categories and overall quality. Fermentation had a larger effect than drying, and the interaction between the two also proved important. The overall cupping scores of well-processed samples were higher on average, but also had significantly smaller standard deviations. This is particularly important, since consistency is critical in the production of export-quality coffee. With the right environmental conditions and careful processing, production of export-quality coffee in the highlands of the provinces of Veraguas and Coclé may be possible.