

Thesis Title      MANUFACTURING AND IMPROVEMENT OF GREEN COFFEE

Name                Pornpol Romayanukool

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Resource Development)

Thesis Supervisory Committee

Nimit Visuthirungsiurai, Ph.D.

Sombat Khotavivattana, M.Sc

Suchart Nawagawong, M.Sc.

Noppaporn Panich, M.Sc.

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#### ABSTRACT

The objective of this study was to investigate green coffee processing of Robusta coffee (*Coffea canephora*, var. *robusta*) by using dry process and wet process. Factors studied in this research were percentage recovery of green coffee, drying rate, physical appearance and liquor quality of green coffee.

It was found that percentage recovery of green coffee prepared by dry process was 20.25% (with 12.0% moisture content) while by wet process was 19.25% (with 9.9% moisture content) by weight of fresh coffee fruit.

For drying rate, it was found that drying rate of dry process was 5.5 percent per day while drying rate of wet process was 11.9

percent per day. Drying period required by dry process and wet process were 9-10 days and 3-4 days, respectively.

As for physical appearance, it was found that the green coffee prepared by dry process was yellowish green, undesirable matter was 0.29%, number of black bean was 39 beans per 300 grams of sample and moisture content was 12.0% by weight. While, green coffee prepared by wet process was yellowish green, undesirable matter was 0.21%, number of black bean was 31 beans per 300 grams of sample and moisture content was 9.9% by weight. In conclusion, the physical appearance of green coffee prepared by both processes was acceptable with the better tendency of wet process.

For liquor quality of green coffee, it was found that the liquor quality of green coffee prepared by both processes was not significantly different at 0.05 level of probability. Unlike the physical appearance, the liquor quality of green coffee prepared by dry process was better than that by wet process. However, both of them were acceptable.

In addition, it was also found that the tendency of drying rate of dry process increased during storage periods of 0, 1, 2 and 3 days but the tendency of liquor quality of green coffee decreased. For wet process, fermentation periods were varied from 0, 1, 2 and 3 days. It was found that the drying rate of 2-day fermented coffee bean was the highest and the liquor quality of this sample was the most acceptable.