

(*Coffea* spp.) IN THE PHILIPPINES

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INTRODUCTION

To achieve self-sufficiency in 2021, the Philippine government aims to increase both the quality of green coffee beans and volume produced (Philippine Coffee Industry Roadmap, 2017).

However, it is necessary to establish a clear system of authenticating coffee seedlings and planting materials to eliminate misidentification that may eventually result in coffee fraud.

This is the first report on quick identification of commercially cultivated coffee in the country that offers an unambiguous method of identification.

MATERIALS/METHODS

1

Collection

2

Characterization

3

Data Analysis

4

Formulation of Dichotomous Key

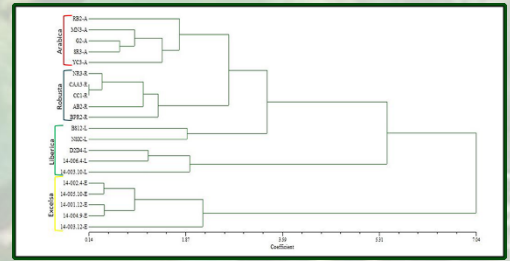


Figure 1: Generated dendrogram using discriminating traits

Identification Key for Commercially-cultivated Coffee (*Coffea* spp.) in the Philippines

(1) Fruits in nodes are clustered; fruits are small (≤ 4cm ²)	go to (2)
(1) Fruits in nodes are not clustered (appear singly); fruits are big (≥ 4cm ²)	<i>Coffea liberica</i> var. <i>liberica</i> (Liberica)
(2) Leaves drooping, with undulate margins	go to (3)
(2) Leaves upright, with entire margins	<i>Coffea liberica</i> var. <i>dewevrei</i> (Excelsa)
(3) Leaves are small (≤ 135cm ²); glossy; and coriaceous	<i>Coffea arabica</i> (Arabica)
(3) Leaves are big (≥ 135cm ²); non-glossy and non-coriaceous	<i>Coffea canephora</i> (Robusta)

Note: Care must be taken in classifying fruit clustering. If fruits are big and appear clustered, or fruits are small but not clustered, validate this based on number of inflorescence per node.

Figure 2: Dichotomous Key

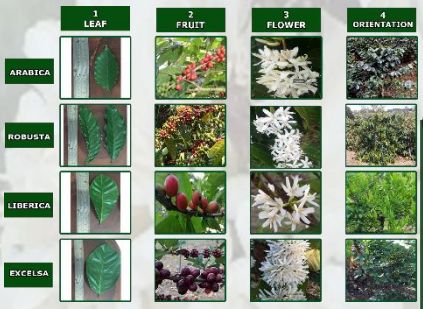


Figure 3: Morphological characters

RESULTS/DISCUSSION

The discriminating traits for the 4 commercially cultivated coffee in the Philippines were

- leaf margin, over all orientation, fruit volume and size of leaf.
- The dendrogram generated four distinct clusters that was based on taxonomic classification.
- The highly discriminating traits were validated by examining secondary data for Arabica and Robusta. Accession found at National Coffee Research, Development and Extension Center, Cavite State University were used for Liberica and Excelsa.

CONCLUSION/PERSPECTIVES

- The highly discriminating traits using leaves, flowers and fruits were used to develop a key to identification that is easy to use which offers a quick and unambiguous method to identify coffee based on morphological traits.
- This information is useful the approval of nursery accreditation, plant material inspection, conservation and management of coffee genetic resources, breeding and selection, and varietal registration.

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