

# Species Diversity of Zingiberaceae in the Central Java's Main Producer of Medicinal Plants

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## ABSTRACT

Information on accuracy of species identification, population stock, species distribution and estimation of abundance is needed for conservation. The objective of this study is to determine the species diversity of Zingiberaceae in the Central Java's main producer of medicinal plants, i.e., Semarang City, Semarang Regency, Boyolali, Sukoharjo, Karanganyar and Wonogiri. The research had been carried out in April until August 2008 using survey and quadrat/plot method. All founded species was counted into total individual in each 5x5 m<sup>2</sup> quadrat. Parameters used in this study are density, frequency, relative dominance, importance value, and species diversity index. The result shows that there are 17 species of Zingiberaceae, i.e., *Alpinia galanga*, *Amomum vulgare*, *Curcuma aeruginosa*, *Curcuma longa*, *Curcuma heyneana*, *Curcuma mangga*, *Curcuma petiolata*, *Curcuma soloensis*, *Curcuma xanthorrhiza*, *Costus speciosus*, *Kaempferia galanga*, *Kaempferia pandurata*, *Zingiber rotunda*, *Zingiber amaricans*, *Zingiber aromaticum*, *Zingiber cassumunar*. *Curcuma domestica* has the highest importance value in Sukoharjo, then follows by Semarang Regency and Wonogiri. The highest diversity was found in Semarang City.

**Keywords:** Species diversity, Zingiberaceae, medicinal plant, Central Java.

## INTRODUCTION

Indonesia has so many species of medicinal plant and traditional knowledge, among hundreds ethnic living in the ecosystem which are very potential to support the environment. Approximately 95 species of medicinal plants are living in the wild and being exploited enormously for providing the traditional medicine material for Indonesia. [1].

The demand for the medicine made of medicinal plant is closely related to the increasing consumption of medicine itself. The high consumption rate for herbal medicine has two correlative dimensions. They are the first aspect that is in relation with wide broad usage of herbal medicine all over the world, and economics aspect that is in relation with additional value and the development of economics in the society. [2]

Among kinds of medicinal plant, there are only 13 species of those medicinal plant which are cultivated. Those are lengkuas, kencur, kunyit, lempuyang, temulawak, temu ireng, keji beling, dringo, kapolaga, temukunci, and sambilot. Indonesia has several medical herbs plantation centres that are located in over 15 provinces in Indonesia. Those centres are located in North Sumatra, Riau, Jambi, DKI Jakarta, West Java, Central Java, Daerah Istimewa Yogyakarta, East Java, Banten, Bali, West Kalimantan, East Kalimantan, North Sulawesi, South Sulawesi, and Gorontalo [3]. West Java, Central Java, and East Java are the major provinces producing medicinal herb plants, with average production around 70 – 90 % from all the national products [4]

The demand for medicinal plant material will be increasing because : (1) the higher population, (2) the higher price of medicinal plant material, (3) the higher number of traditional medicine industries and factories in society, and (4) people change their habit, from modern habit and back to nature. These situations become the major causes of the extinction of some medicinal plants permanently, and will cause death and prevent the growth of regenerations or reproduction of those plants, so that they will threaten the existence of some medicinal plants.

