

Temulawak under Organic Farming System and Its Relationship with Bioactive Content: A Case Study in Semarang District

Munif Ghulamahdi¹⁾, Edy Djauhari²⁾, Eka Intan³⁾, Waras Nurcholis⁴⁾

¹⁾ Agronomy and Horticulture Department, Bogor Agricultural University, Kampus Darmaga, Bogor 16680

²⁾ Biochemistry Department, Bogor Agricultural University, Kampus Darmaga, Bogor 16680

³⁾ Economics Department, Bogor Agricultural University, Kampus Darmaga, Bogor 16680

⁴⁾ Biopharmaca Research Center, Bogor Agricultural University, Jln. Taman Kencana, Bogor 16151

*email: bfarmaka@gmail.com

ABSTRACT

The objectives of this research were to study the comparative input and output of *temulawak* production under organic and conventional farming systems, and to analyze bioactive compound under these farming systems. The experiment was conducted in 4 villages, i.e. Kramas, Buluran, Tembalang, and Jabungan in the District of Semarang. The method involved 75 farmers which were randomly selected in each village. The results showed that farmers implemented organic and conventional were 88 and 22%, respectively, of the total number of the participants. The production cost of organic and conventional farming systems were relatively the same, but the production income from organic system was higher than that of the conventional farming. This concludes that the production of *temulawak* under organic farming system gives higher profit than that of the conventional farming. The highest curcuminoid content was observed on 9 months-old plant than that of 6, 7, 8, and 10-months old plants.

Key words: *Curcuma xanthorrhiza*, organic farming, curcuminoid