

**PENGARUH APLIKASI
ARANG AKTIF SERBUK KAYU JATI TERHADAP
PUPUK N, P, K SEBAGAI PUPUK PELEPAS LAMBAT
PADA TANAMAN CABAI RAWIT (*Capsicum frutescens* L.)
DI TANAH PASIR PANTAI**
*(The Effect of Application Activated Charcoal of *Tectona grandis* to N, P, K as
Slow release Fertilizer of *Capsicum frutescens* (*Capsicum frutescens* L.)
in Sand beach soil)*

Muhamad Badri
Ir. Mulyono, M.P./ Ir. Bambang Heri Isnawan, M.P.

*The aim of this study was studying the effect of dose of activated charcoal powder of wood of *Tectona grandis* and determining the dose of activated charcoal powder as a slow release fertilizer for the growth and the yield of *Capsicum frutescens*. The research was conducted in November 2015 until April 2016 at Research Field and Laboratory of Research of Faculty of Agriculture, Universitas Muhammadiyah Yogyakarta and Laboratory of Heat and Mass Transfer (Center of Engineering Science) Universitas Gajah Mada.*

This research was design by using a completely randomized design (CRD) single factor consisting of 6 treatments that repeated 3 times. The treatments were P1 / Control (without activated charcoal + Urea, SP-36 and KCl), P2 (200 kg / ha activated charcoal + Urea, SP-36 and KCl), P3 (225 kg / ha activated charcoal+ Urea, SP-36 and KCl), P4 (250 kg / ha activated charcoal + Urea, SP-36 and KCl), P5 (275 kg / ha activated charcoal + Urea, SP-36 and KCl), P6 (300 kg / ha activated charcoal + Urea, SP-36 and KCl).

*The results by using Duncan Multiple Range Test revealed that application of Activated charcoal powder of wood of *Tectona grandis* affected same effect compared to control treatment in measuring of parameters including plant height, number of leaves, number of branches, number of fruits, plant fruit weight, plant fresh weight, dry weight, leaves area and the ratio of the shoot and root. Application of activated charcoal powder with the dose of 200 kg / ha, 225 kg / ha, 250 kg / ha, 275 kg / ha and 300 kg / ha has revealed that it was estimately not slow-realease fertilizer on *Capsicum frutescens*.*

*Keywords: activated charcoal, *Tectona grandis*, slow-release fertilizer, *Capsicum frutescens*.*