

## The Role of Organic Matter and Microbe on Growth and Yield of Young Ginger

Gusmaini, Nur Maslahah

Indonesian Medicinal and Aromatic Crops Research Institute

Jl. Tentara Pelajar No. 3 Cimanggu Bogor 16111

Telp : 0251-321879, 71959888, Faks: 0251-327010

Email : balitro@telkom.net, gusmaini2004@yahoo.com

### ABSTRACT

Ginger plant requires high nutrients for its growth and rhizome formation. It needs fertile and porous soil as well. Ginger is susceptible to disease. One effort to overcome this problem is using organic materials and microbes. The application of organic matter can improve rhizome yield. Microbes have many benefits for plant such as fixing N<sub>2</sub>, triggering plant to secrete hormone, and against pathogen. These advantages will give positive impact on ginger yield. The purpose of this research is to discover the effect of organic matter and microbe on growth and yield of young ginger plants. This research was conducted at Cimanggu Installation Research, Bogor, Indonesia from December 2006 to May 2007. The experiment was arranged in Randomized Block Design, with three replications. The treatments consisted of five treatments, i.e. (1) manure, (2) manure + endophytic microbe, (3) manure + endophytic microbe + antagonistic microbe, (4) compost + endophytic microbe, (5) compost + endophytic microbe + antagonistic microbe. The result showed that compost + microbe of endophytic + antagonistic microbe treatment gave the best growth (plant height, leaf number, and stem diameter were 47.9 cm, 96.6, 6.4 mm, respectively) and yield (fresh weight of rhizome was 215.04 g/plant).

Key words: ginger, *Zingiber officinale*, organic fertilizer