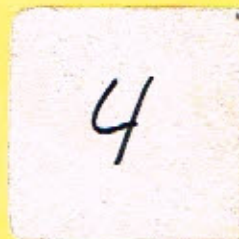


Volume 3, 2019

ISSN 221-601X



**The First International Symposium On Food  
and Agrobiodiversity Conducted by  
Indonesian Food Technologists Community**

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The First International Symposium on Food and Agro-biodiversity (ISFA2014)

## Effect of Difference Weed Control Methods to Yield of Lowland Rice In The SOBARI

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### Abstract

Weed competition will reduce rice yield. The research aimed to study the effect of difference weed control methods on rice yield in SOBARI. It has been conducted from October 2013 until February 2014, using Randomized Block design with five treatments (A = manual weeding, B = unweed control, C = herbicide containing Penoxulam + Cyhalofop-butyl, D = Bispyribac sodium, and E = 2, 4 D + Methyl metsulfuron). The results showed that weed control using herbicides containing Bispyribac sodium and 2.4 D + Methyl metsulfuron showed similar results as manual weed control on rice yield.

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Peer-review under responsibility of the organizing committee of Indonesian Food Technologist Community

*Keywords:* herbicide, rice yield, SOBARI, weed control

### INTRODUCTION

Rice is a major food staple for most people of Asia, especially Indonesia. The rice production has to be increased to meet demand due to population growth [3]. One of the important things on increasing rice production is to minimize crop loss which is caused by weed competition because weeds do not only reduce the rice production but also have an adverse effect on rice grain quality.

The best paddy rice growth occurred in a depth of 2-25 cm stagnant water. Meanwhile, at this time condition of water resources is increasingly limited so that it is necessary to find a method to overcome the existing problem. It includest. the water management in lowland rice farming. One of the technologies that can be applied is the approach of System Organic-Based on Controlled Aerobic Rice Intensification (SOBARI).

SOBARI is a holistic system of rice production based on integrated local input (straw compost, bio fertilizers, and other inputs) with the concept of LEISA (low external input sustainable agriculture). Water management in SOBARI method requires only half to one-third of the conventional way, saturated wetland or flooded. It saves water

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