

# Korea- Indonesia Joint workshop

April 10, 2019

Future convergence building International Convention Center

Hankyong National University

**KOICA**  
Korea International  
Cooperation Agency



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한경대학교  
HANKYONG NATIONAL UNIV.

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(University Muhammadiyah yogyakarta)

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# Indonesia-Korea Joint Workshop

## - Climate Change and Food Security -

Date: 10(Wed.) April 2019

Place: Future Convergence Technology Building  
(Convention Center 2F #210)

TIME	CONTENTS
09:00~09:30	Registration
<b>Session 1</b> <b>JOINT CONFERENCE</b>	
09:30~10:00	Opening Ceremony
10:00~10:20	Climate Change & Agriculture by <b>Prof. Nam Ho Lee</b>
10:20~10:40	Income and Welfare Analysis of Shallot Farmers in Coastal Land in Bantul Regency by <b>Dr. Muhammad Fauzan</b>
10:40~11:00	<b>Environmental and Ecological Multifunctionality</b> <b>Assessments of Paddy Field Rice in Korea</b> <b>by Prof. Tae Wan Kim</b>
11:00~11:20	Tea(coffee) Break/( <b>*MOA Ceremony will be held separately at Future Convergence 8F meeting room</b> )
11:20~11:40	Analysis of Food Security's Condition in Bantul Regency Using Cluster Analysis Method by <b>Dr. Widodo</b>
11:40~12:00	Adipocyte Determination and Adipocyte Differentiation of Stromal Vascular Cells Isolated from Intramuscular Tissue of Hanwoo Beef Cattle Treated by Acetate and Propionate by <b>Prof. Seong Gu Hwang</b>
12:00~13:30	Lunch
<b>Session 2</b> <b>POSTER &amp; ORAL PRESENTATION</b>	
13:30~14:30	Poster Presentation
14:30~16:30	<b>Oral presentation</b> Agriculture Eng. #503 @ Future Convergence Chemical Eng. #513 @ Future Convergence
16:30~17:00	Closing

Indonesia-Korea Joint Workshop  
On Climate Change and Food Security  
April 9, 2019, HKNU, Anseong Korea

## The Application Levels of Organic Rice Cultivation Technology in Gempol Village, Klaten

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### *Abstract*

This study aims to determine the level of application of organic rice cultivation technology in Gempol Village, Karanganom, Klaten, Est Java. This study uses a descriptive method by measuring scores and categorizing. The data used are primary data obtained by interviews based on questionnaires. The results showed that farmers as a whole had a level of application of organic rice cultivation technology in Gempol Village with a score of 51.75 on the score range 18-54 or 93,75% of total score, included in the "High" category. Planting indicators get the lowest score (76,75%), because only 35% of farmers use plant spacing according recommendations.

### *Keywords*

Level of Application, Cultivation Technology, Organic Paddy.

### **1. Introduction**

The use of excessive chemicals causes the soil structure to become dense; decreasing physical, chemical, and biological soil condition; and soil carrying capacity for plant growth decreases (Directorate General of Agriculture 2016). Chemicals are also dangerous (such as chlorine and mercury compounds) for land and living things. In 1992 approximately 18 million hectares of land in Indonesia experienced a decline in land quality. In 2002 this area increased to 38.6 million ha (Ministry of Agriculture 2015). If this condition is allowed to continue, then this can lead to increasingly extensive land damage and result in a decrease in land and plant productivity.

On the other hand, the growing awareness about food health and food security, developing organic agriculture. According to Gribaldi (2009), organic agriculture must be able to build relationships that ensure justice related to the environment and the opportunity to live together. Organic agriculture is one of the technologies that is environmentally sound.

Organic agriculture is planting, fertilizing, maintenance, planting and weeding, water management, pest control, harvesting and post-harvest.

The problem is the extent to which this technology has been truly applied by farmers. In this regard, this study aims to determine the level of application of organic farming technology. The study was conducted in Gempol Village, Karanganom District, Klaten Regency, Est Java.

### **2. Method**

The study uses descriptive methods with scoring and categorizing. Respondents were taken in census, ie all members of the population were used as research respondents because the number of respondents was relatively small (Sugiyono, 2018), Organic rice farmers in Gempol Village were all made as respondents with 44 farmers.

### 3. Results and Discussion

Organic rice cultivation technology includes 5 components, namely seed preparation, land preparation, planting, fertilization, and maintenance. The basic technological difference between organic rice cultivation and conventional rice cultivation lies in its fertilization and maintenance activities. The analysis shows that the level of application of organic rice cultivation technology to each indicator is included in the high category (Table 1)

**Table 1. Application Score of Organic Rice Cultivation Technology of Farmers in Gempol Village**

No	Indicator	Score range	Score mean	Percent score (%)
1	Seed preparation	5 - 15	14,77	97,70
2	Land preparation	3 - 9	8,93	98,83
3	Planting	2 - 6	5,07	76,75
4	Fertilization	4 - 12	11,68	96,00
5	Maintenance	4 - 12	11,30	91,25
	Total	18 - 54	51,75	93,75

Table 1 shows that the farmers as a whole reach 93,75% of total score. It means the farmers are have obedient behavior in following the recommendations according to the operational standard procedure (SOP) of organic rice cultivation. The interesting thing is the planting indicator, only getting a score of 76.75 percent. This is because there are quite a lot of farmers (43%) planting with less spacing as recommended (23 x 23 cm). While farmers who plant with recommended planting distances (25 x 25 cm) are only 36%. In fact, there are still 20% of farmers who believe that the spacing is more tight, not as recommended (20 x 20 cm).

Organic rice farmers believe that with a closer spacing, the number of seeds planted automatically is more and will provide higher rice yields. Rice farmers in Gempol Village also have other reasons, that planting with very narrow distances will minimize the growth of grass weeds.

### 4. Conclusion

The overall level of application of organic rice cultivation technology in Gempol Village is included in the "High" category with a score of 51.75 on the score range 18-54, or 93,75 percent score. Planting indicators get the lowest score (76,75%), because only 36% of farmers use plant spacing according to recommendations.

### 5. References

- Petunjuk Teknis Pengembangan Desa Pertanian Padi Organik. <http://www.pertanian.go.id> diakses 16 Maret 2018.
- Gribaldi. (2009). Pertanian Organik dan Teknologi Pendukungnya. *Jurnal Agronomi*, Vol.1No.2:19-24. Universitas Baturaja. Direktorat Jenderal Pertanian. (2016).
- Kementerian Pertanian. (2015). Rencana Strategis Kementerian Pertanian Tahun 2015 - 2019. <http://www.pertanian.go.id> diakses pada 16 Maret 2018.
- Purwasasmita, M & Sutaryat, A. (2014). Padi SRI: Organik Indonesia. Penebar Swadaya. Jakarta Timur.
- Sugiyono. (2018). Metode Penelitian: Kuantitatif, Kualitatif, dan R&D. Alfabeta. Bandung.