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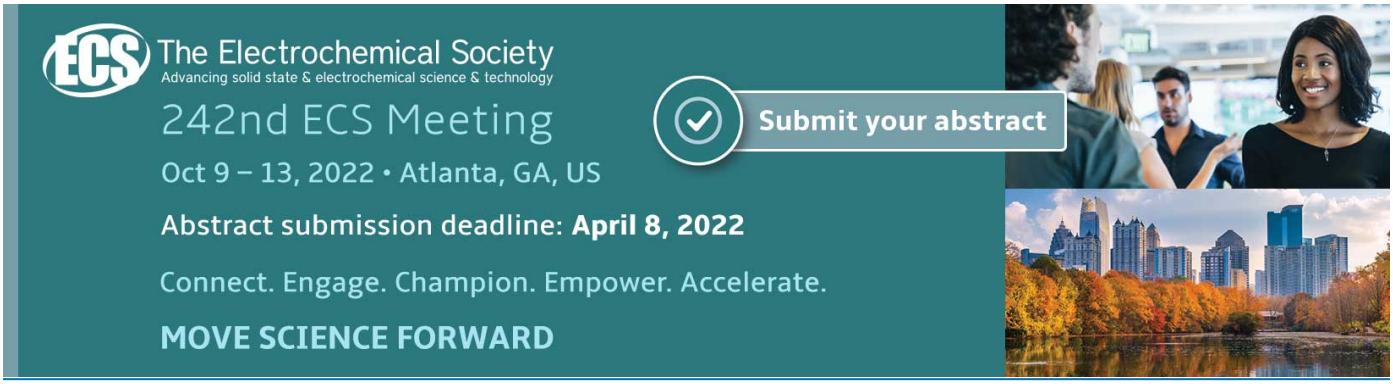


PREFACE

On behalf of the Organizing Committee, I would like to express my sincere gratitude for your contributions and participations in the International Conference on Sustainable Agriculture for Rural Development 2018 (ICSARD 2018) which was held in Purwokerto, Indonesia, 23-24 October 2018.

Agriculture is a vital sector since it provides foods and raw materials related to food for human life. Agriculture gives employment opportunities to a very large proportion of communities. It also has a great significance in global trade as well as foreign exchange resources, which in turn might improve a country's GNP value. Agriculture is at a crossroad. It has to find ways to feed the world while being environmentally, socially and economically sustainable. The International Conference on Sustainable Agriculture for Rural Development 2018 (ICSARD 2018), therefore, was aimed to promote scientific and educational activities towards the advancement of knowledge by improving the theory and practice of various disciplines and areas of sustainable agriculture. This conference addressed the food system activities of processing, distributing and consuming food, as well as food production from crop and livestock; the availability, access, utilization and stability dimensions of agriculture; and the synergies and trade-offs between economic, environmental, health and social objectives and outcomes. The conference became an excellent opportunity for academic researchers, industry professionals, government delegates and students to interact and share their experiences and knowledge on cutting-edge developments in the fields of Agro-technology, Soil Science, Agronomy, Horticulture, Plant Protection, Plant Breeding and Biotechnology, Agroecology, Food Science and Technology, Agricultural and Biosystems Engineering, as well as Socio-economics of Agriculture and Agribusiness.

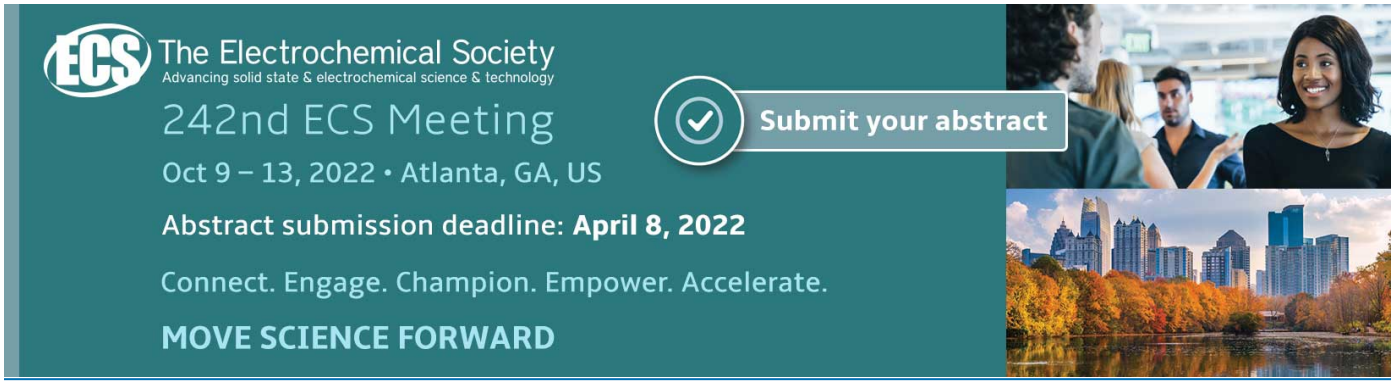
ICSARD 2018 was organized by the Faculty of Agriculture, Jenderal Soedirman University, Indonesia. The conference was joined by eight keynote speakers who are leading experts from reputable organizations, i.e. Prof. Dr. Robert Edwin Paull (University of Hawai'i at Manoa), Prof. Dr. Shao Hui Zheng (Saga University, Japan), Dr. Tuyen Chan Kha (Nong Lam University, Vietnam), Prof. Dr. Rindit Pambayun (Sriwijaya University, Indonesia), Prof. Lilik Soetiarso, Ph.D (Gadjah Mada University, Indonesia), Prof. Dr. Ahmad Yunus (Sebelas Maret University, Indonesia), Prof. Loekas Soesanto, Ph.D (Jenderal Soedirman University, Indonesia), and Prof. Totok Agung DH, Ph.D (Jenderal Soedirman University, Indonesia). Participants of this conference came from Sudan, Ecuador, Japan, Malaysia, Thailand, and Indonesia.

As the general chair of this conference, I realize that the success of the conference depends ultimately on the many people who have worked with us in planning and organizing both the technical program and supporting social arrangements. In particular, we thank the Program Chairs for their wise advice and brilliant suggestion on organizing the technical program and also the Scientific Committee for their thorough and timely reviewing of the papers. Recognition should go to the Organizing Committee members who have all worked extremely hard for the details of important aspects of the conference programs and social activities. We would also like to thank our special honorary guests and plenary speakers for their dedication to this event.

I hope that this publication can bring beneficial contributions to the development of knowledge particularly in the field of sustainable agriculture.

Susanto Budi Sulistyo, Ph.D.
Jenderal Soedirman University, Purwokerto, Indonesia
General Chair of ICSARD 2018 Conference Committee
February 2019, Purwokerto, Indonesia

Committee of ICSARD 2018



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E D Purbajanti, W Slamet, E Fuskhah and Rosyida

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A Sodiq, P Yuwono, J Sumarmono, Y N Wakhidati, M Rayhan, A H Sidhi and A Maulianto

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S Sahirman, Ardiansyah, M Rifan and E Melmambessy

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J. Riyanto, Sudibya, S D Widyawati, A Fatmasari and A A Tyastuti

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K Faozi, P Yudono, D Indradewa and A Ma'as

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N Kuswardhani and N F Yulian

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The reasons for farmers not to adopt System of Rice Intensification (SRI) as a sustainable agricultural practice: an explorative study
P Arsil, S Sahirman, Ardiansyah and H H Hidayat
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N Kuswardhani, F N Sari and Y Wibowo
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N Kuswardhani, M Misbahudin and B H Purnomo
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A Nur, S B Santoso, K Syahruddin, R Efendy and E G Lestari

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B Dharmawan, A R Karim and U Nurdiani

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H Palacios, D Villamarín, J Velásquez and W Vásquez

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H Palacios, M Tamayo, H Terán, J Velásquez and W Vásquez

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W Roessali, E D Purbajanti and T Dalmiyatun

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Wahyuningrat, S Rosyadi, T Haryanto and M Setiansah

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A Sudarmaji, S Sahirman, Saparso and Y Ramadhani

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A Rosyad, R Satriani and T Y Astuti

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N Kuswardhani, Ratnawati, I B Suryaningrat and J Sumarno

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The meat chemical quality of lamb's longissimus dorsi muscles with addition of saponified animal and vegetable oil in the ration

A K Wati, S D Widyawati, W P S Suprayogi and J Riyanto

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Effects of decomposition rate of *Chromolaena odorata* and straw rice in fresh and compost form to the growth and yield of rice
R Agustina, R Jumadi, U Firmani and Faisal Abdul R H
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Effects of supplementation of cellulase, carnitine and fish oil on lipids and fatty acid contents of Indonesian native chicken meats
Sudibya and J Riyanto
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Suwarto, I Dinuriah, R Pramesthi and Soraya
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Efficacy of the combination of herbicide active ingredient metsulfuron methyl, ethyl chlorimurone, sodium (2,4-dichlorophenoxy) acetate in the succession of rice weeds with different doses of cow manure
A Rizal-Az, D Arbiwati and L Peniwirati

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Development of arrowroot flour and taro flour snack bar with banana bud flour supplementation as snack for diabetes patient

A R Priatama, I Nuraeni and Saryono

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B Sumanto, D N Ethika and D Kusnaman

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D Mustikawati, Suntoro and Pardono

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The effects of Arenga wood-fiber size and nutrition concentration on growth and yield of substrate hydroponic Kailan (*Brassica alboglabra*)

D Harjoko, W S Dewi, Samanhudi and B Pujiasmanto

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E B Irawati, E R Sasmita and A Suryawati

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Effectiveness of some clove and citronella oil based-pesticide formulas against root-knot nematode on ginger

S R Djiwanti, Supriadi and Wiratno

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Replanting of smallholder palm oil plantations in Dharmasraya District, West Sumatera Province, Indonesia

I W Syarfi, M Noer and A S Utami

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Agronomic performance of F4 population of rice breeding lines derived from the cross of Black Rice and Mentik Wangi varieties

Suprayogi, M A Praptiwi, A Iqbal and T J Agustono

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Factors affecting entrepreneurial intentions among beef cattle farmers in Boyolali Regency, Central Java, Indonesia

S H Purnomo, E T Rahayu, A I Sari and S Emawati

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T Setyaningrum, D Indradewa, A Priyatmojo and E Sulistyaningsih
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S N Hadi, P S Dewi and Kartini
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Sakhidin, A S D Purwantono and S R Suparto
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Enhancing potato (*Solanum tuberosum* L.) yield by using biological organic fertilizers and soil conservation practices on the slope andisol
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Kharisun, Fadillah, Mujiono and Suciati
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S R Djiwanti

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M Rum, D H Darwanto, S Hartono and Masyhuri

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Influence of different extraction methods on physic-chemical characteristics and chemical composition of coconut oil (*Cocos nucifera* L)

A I Ibrahim, S Nurjanah, A M Kramadibrata, R. Naufalin, Erminawati and H. Dwiyanti

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E W Tini, P Sulistyanto and Rr P H Purwantini

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D D Putri, D H Darwanto, S Hartono and L R Waluyati

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M D D Maharani

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A Mubarak, Irham, H M Jangkung and S Hartono

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S Mukodiningsih, J Achmadi, F Wahyono, T R Taswanda, Sugiono and S J Ohh

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Pollinator diversity and soybean productivity with flowering plant (Crotalaria and Rosella)

Sholahuddin, R Wijayanti, R B Arniputri, Supriyadi and D Widyaningrum

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012114

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The utilization of phenol in betel leaf (*piper betle*) as feed to reduce *Aeromonas hydrophylla* infection in dumbo catfish (*Clarias gariepinus*) and gourami (*Ospronemus gouramy* Lac.) fish cultivation

H Soeprapto and P Syarif

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Antioxidant activity of microencapsulated lemongrass (*Cymbopugon citratus*) extract

Antioxidant activity of microencapsulated lemongrass (*Cymbopugon citratus*) extract

Erminawati, R Naufalin, I Sitoresmi, W Sidik, and A Bachtiar

University of Jenderal Soedirman, Purwokerto, Central-Java, Indonesia

Email: erminawati.w@gmail.com

Abstract. Lemongrass is a plant with various bioactive components including alkaloids, flavonoids, tannins and essential oils; which is potential to be developed into natural preservative. However, the components are susceptible to the environmental conditions, such as temperature or oxygen contact. Formulation of lemongrass extract (LE) into powder form through microencapsulation, able to retain its stability over temperature or oxygen contact, moreover in the form of powder its application on food ingredients become flexible. This study aimed to assess antioxidant activity of microencapsulated lemongrass extract. This study used Randomized Block Design (RBD) with 18 treatment combinations and conducted in two replications. Factors examined in this study include; lemongrass extract concentrations (K); 25, 16.7 and 12.5%; microcapsule ingredients (P); maltodextrin and β–cyclodextrin and heating temperature (T) of; 120, 130, and 140ºC. Result of the study showed that microencapsulation of 25% lemongrass extract using β–cyclodextrin heated at 120ºC gave the highest antioxidant activity of 14.14% and the highest total phenol value of 34.64 mg/100gr. This study resulted that the use of β–cyclodextrin produce microcapsule with better antioxidant activity.

1. Introduction

Lemongrass (*Cymbopogun citratus*) is a local plant from the family *Graminae / Poaceae*. This plant grows in areas with tropical and sub-tropical climates in Southeast Asia and Africa [1]. Lemongrass is known to be rich in bioactive compounds, such as; alkaloids, flavonoids, tannins and essential oils; which is known to have many benefits, especially in the fields of food, agriculture, pharmacy and health, through the use of its bioactive compounds. In Indonesia, utilization of lemongrass has not been commercially developed, most are only used for flavor ants and herbal drinks. Therefore, it is necessary to develop products from lemongrass so that their use is wider. In general, the use of lemongrass can be obtained from its bioactive compounds such as citral at 65 - 85% of the total essential oils components of as a result of lemongrass extraction [2,3]. Lemongrass essential oil is generally obtained through distillation process of lemongrass leaves, the oil is yellowish with a distinctive aroma of lemon (citral). In addition, citral also proven to have anti-fungal activity that can control post-harvest disease in oranges [4,5].

To optimize its utilization, the bioactive compounds contained in lemongrass need to be extracted. Microwave Assisted Extraction (MAE) is a simple and economical method used to extract bioactive compounds from plants [6]. By applying MAE method to Rosella flower extraction, was found increase the quality and quantity of extracted bioactive components, in addition reducing extraction time and saving production costs [7].

As it is understood that because of its structure, extract of bioactive compounds is unstable, not

resistant to changes in environmental conditions so that its utilization becomes limited and not flexible. For the purpose of maximizing and flexibility of utilization, extract formulations were carried out into solid form, using encapsulation techniques and suspension forms. One solution that can be used is coating the active compound using the encapsulation method. According to [8], microencapsulation is a method of coating a compound with a very small size with a particle diameter of 15-20 microns. The use of encapsulation technology can increase the distribution of stored active compounds and expand surfaces contact of particle [9].

2. Materials and methods

2.1. Extract preparation and microencapsulation formula

Ethanolic extract of lemongrass was prepared using fresh lemongrass stalk washed and sorted, then chopped into smaller size, followed by pounding so that the aroma of the lemongrass comes out. Sixty percent ethanol was used as solvent. Extraction was conducted using MAE method. The ratio of lemongrass to solvent was 1:10 extracted for 7 minutes. The extract obtained then evaporated to remove the remaining solvents.

Furthermore, microencapsulate formulation of lemongrass ethanolic extract was done in order to protect the bioactive components in the extract. The extract mixed with a solution of encapsulant agent (20% w/v of maltodextrin or β-cyclodextrin) which had been mixed with 1% w/v CMC as emulsifier. The suspension then stirred with a magnetic stirrer for 30 minutes and followed with hand mixer for 3 minutes. Then the suspension is ready for microencapsulation. The microencapsulation process using a spray dryer is carried out with various drying temperatures (120,130 and 140°C).

2.2. Characterization

2.2.1. Total phenolic analysis. To 0.4 mL of extract 1.5 mL of Folin-Ciocalteu reagent (10% v /v) was added, then incubated for 5 minutes. Afterward, the mixture was mixed with 1.5 mL of 7.5% (w/v) Na_2CO_3 solution, followed with incubation at room temperature for 90 minutes at dark. The absorbance was measured using UV-Vis spectrophotometer at 765 nm. In this study, Gallic acid is used as a standard. The results obtained were represented as mg gallic acid equivalent (GAE)/g of material.

2.2.2. Antioxidant activity analysis, DPPH methods. DPPH solution was prepared by weighing 1.97 mg DPPH, dissolved in methanol to 25 mL (concentration of 0.2 mM). Then the sample solution was prepared for 50 mg / L. Then to 1.5 mL sample solution 0.75 mL of DPPH 0.2 mM was added, the mixture is homogenized and left in a dark for 30 minutes; measured using UV-Vis spectrophotometer at 517 nm. The measurement was conducted in triplicates for each sample solution. Control solutions used were BHT and ascorbic acid at concentrations of 2, 4, 6, 8 and 10 mg / L. The inhibition calculated using the formula:

$$\% \text{ inhibition} = \frac{C-S}{C} \times 100\%$$

With C is control absorbance and S is sample absorbance

2.2.3. pH measurement. pH measurements were carried out using a digital pH meter which was first calibrated with pH 4 (acetate buffer) and pH 7 (phosphate buffer) solutions.

2.3. Statistical analysis

Data were analyzed using the F test (variance test) at the 95% confidence level and further test (DMRT) to differentiate between treatments**.**

3. Results and discussions

3.1. Total phenolic

The study showed that the highest total phenol value was obtained from the treatment of β-cyclodextrin encapsulant with 25% LE of 34.64 mg/100g, and the lowest was obtained from maltodextrin encapsulant 25% LE of 17.19 mg/100g (Figure 1). In the use of β-Cyclodextrin as encapsulants, it shows that the total phenol obtained is directly proportional to the amount of extract used; whereas the use of maltodextrin is inversely proportional. This effect occurs due to the nature of each encapsulant. Maltodextrin, has been reported to have a higher protective effect on phenolic and anthocyanin compounds than soy protein isolates for microencapsulating pomegranate juice [10]. Therefore, maltodextrin (P1) shows that the higher amount of encapsulant used, the more the protection provided for bioactive compounds from lemongrass.

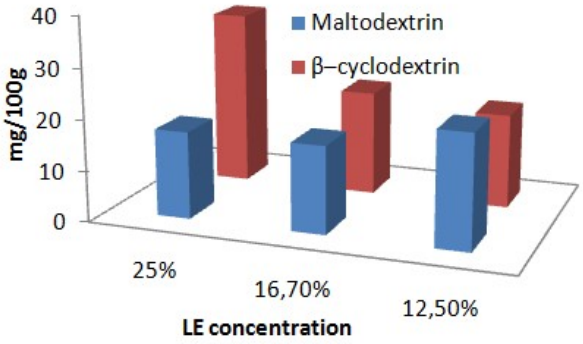

Figure 1. Total Phenolic content of MLE

β-cyclodextrin is a cyclic oligosaccharide, composed of glucose units linked by α-1,4 glycoside bonds derived from enzymatic degradation of starch by certain bacteria such as *Bacillus macerans*. The center of the β-cyclodextrin cavity is hydrophobic, while the periphery around the wall is hydrophilic [11]. The properties of LE are hydrophobic compounds so that the extract is protected in the cavity β-cyclodextrin. This shows that β-cyclodextrin is capable to trap the LE much better than the maltodextrin. Furthermore, the efficiency of encapsulation process was calculated as total phenolic content of LE used divided by total phenolic content of MLE [14] (Table 1)

Table 1. Encapsulation efficiency

Treatment	Total phenolic content in		Encapsulation efficiency
	LE used	MLE	
P2K1T3	44,7 mg/100g	67,89 mg/100g	66%
P2K3T1	7,8 mg/100g	67,89 mg/100g	11%

Result of this study showed that the treatment of β-cyclodextrin encapsulant, 25% LE and drying temperature of 140ºC (P2K1T3) gave the highest total phenol value of 44.7 mg / 100g. While the lowest total phenol of 7.8 mg / 100g was produced from treatment of β-cyclodextrin encapsulant; 12.5% extract and drying temperature of 120ºC (P2K3T1). This can be explained in terms of the phenol compounds trapped or encapsulation efficiency; namely the number of bioactive compounds that can be protected by encapsulation. This shows that the larger the encapsulant used, the more phenol compounds that can be trapped [12] (Table 1).

In term of heating temperature, it showed that the higher the temperature the higher the total phenolic [13]. In addition, each encapsulant agent provides unique properties in protecting bioactive compounds. According to [14], the appropriate proportion of encapsulation will provide good emulsification and drying properties so as to enhance retention of core material during microencapsulation with a spray dryer.

3.2. Antioxidant activity

This study resulted that the highest antioxidant activity of 14,14% resulted from treatment 25% LE with β – cyclodextrin (P2K1); while the lowest of 5,9% resulted from treatment 25% LE with maltodextrin (P2K1) (Figure 2). This study resulted that encapsulation agent maltodextrin gave lower antioxidant activity microencapsulate compare to that of β – cyclodextrin. This because β – cyclodekstrin poses better antioxidant protective capability. β – cyclodextrin has been used to improve bioavailability through increasing water solubility on its hydrophobic cavity, improving stability and increasing permeability of water-soluble component in its hydrophobic cavity [15]. When compared to the nature of maltodextrin, the properties possessed by maltodextrin are only form a matrix with low browning possibility, inhibit crystallization, strong and stable binding power in o/w emulsions [16]. In the maltodextrin encapsulant, the treatment of 16.7% LE was higher than 25% and 12.5% extract. So it can be concluded that the treatment of 16.7% extract is the optimal point of encapsulant to protect antioxidants. This happens because related to the level of LE which capable to be protected in MLE. The more bioactive compounds that are saluted, the proportion of coating material used is also needed. A stable emulsion can provide considerable encapsulation efficiency, while the results at high oleoresin concentrations cause a decrease in yield, because at the concentration of the capsule wall is unable to hold the oleoresin so the capsule will break and the oleoresin will come out, which will ultimately reduce encapsulation efficiency.

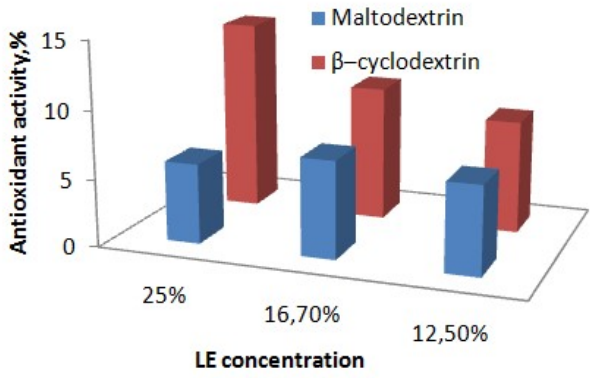

Figure 2. Antioxidant activity of MLE

The decrease in antioxidant activity as the proportion of encapsulant increases is caused by the ability of encapsulant to cover oil droplets. It is assumed that in higher proportions a thicker encapsulant matrix is formed so that it is more optimal in protecting oil droplets. Good coating material matrix provides a good influence on encapsulation products, especially protecting from oxidation and heat [17]. In addition, a decrease can occur due to the viscosity of the coating material. The more proportion of coating material used, the more viscosity of the suspension. High viscosity will reduce yield, which in turn will reduce protection ability of coating material on the active compound. High viscosity will cause atomization process to be disrupted and decrease the drying

speed hence decreases of microcapsules yield [18]. This causes a decrease in the value of antioxidant activity in the β-cyclodextrin encapsulant.

In term of heating temperature used, this study showed that the highest antioxidant activity of 13.93% resulted from treatment at 120^{0}C with β-cyclodextrin encapsulant, while the lowest of 4.92% from treatment at 130^0 C with maltodextrin encapsulant (Figure 3) Again, that the highest antioxidant activity resulted from β-cyclodextrin encapsulant treatment, with the highest the heat temperature used the lowest the antioxidant activity. This is consistent with the previous study [19] about antioxidant activity of coffee found that high temperatures maintained during cooking can cause a high reduction of cinnamic hydroxy acids when compared to that at room temperature. However, with the addition of β-cylodextrins to the sinamat hydroxy acids, produce a decrease on cinnamic hydroxy acids reduction. This indicates that the microencapsulation method using β-cylodextrins can provide protection and stability. The higher the temperature used, the faster the oxidation process takes place, oxidation can occur due to the reaction between unsaturated triglycerides with oxygen from the air [20]. This reaction is accelerated because of the presence of heat, light and metals in very small concentrations, especially copper.

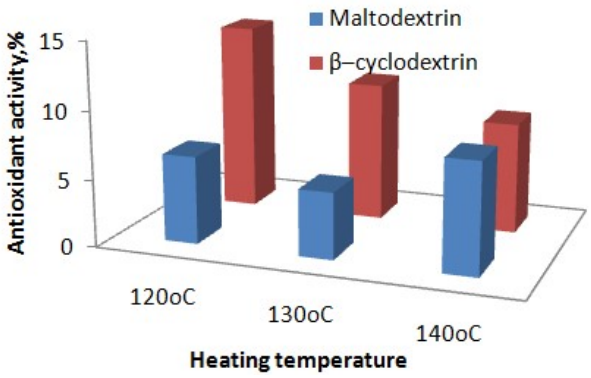

Figure 3. Effect heating on MLE antioxidant activity

Furthermore, effect of heating temperature on maltodextrin encapsulant showed the graph decreases at a temperature of 120^{o}C to 130^{o}C. Then the antioxidant value rises again at 140^o C (Figure 3). This is because the viscosity of the maltodextrin encapsulant affects the drying temperature. Very high viscosity can provide fast protection for protected bioactive compounds. According to [21], higher viscosity will cause the formation of layers that surround the nucleus quickly so that the nucleus is immediately protected. The higher drying temperature will help the drying process faster as explained earlier. Therefore, the viscosity properties of the maltodextrin encapsulant and drying temperature variations will have an effect on the value of the MLE antioxidant activity.

That the β-cyclodextrin encapsulant is better in encapsulated the lemongrass bioactive compounds compare to maltodextrin as previously discussed (Table 1). A good encapsulant when is capable in protecting and controlling the release of active compounds in the oil. The material chosen must depend on the nature of the oil to be encapsulated and the desired characteristics of the final microcapsules. Ideally, encapsulants must be soluble in water, biodegradable, form solutions with low viscosity, produce powder with certain properties (not hygroscopic, non-porous, soluble, stable, etc.), inexpensive, easily dried and not reactive [21].

Then when compared with the MLE total phenolic content, then the influence of the interaction of MLE antioxidant activity is not correlated with the MLE total phenolic value. This indicates that the MLE antioxidant activity is negatively correlated with its total phenolic content because antioxidant compounds are not all derived from phenol compounds. This is consistent with the study

of [22, 23] which states that the results of antioxidant activity have a negative correlation with amylase and total phenol.

4. Conclusions

In conclusion microencapsulates formulation of LE using encapsulant of β-cyclodextrin produced lemongrass extract microcapsule (MLE) with antioxidant activity of 14.14% and the highest total phenol value of 34.64 mg/100gr. This study resulted that the use of β–cyclodextrin produce microcapsule with better antioxidant activity.

Acknowledgement

Thank you to the Rector of the University of Sudirman through the Head of the General Soedirman University Research and Community Service Institute (LPPM) for the funds provided through the PDUPT Funded Research Fund 2018 with the Decree of the Head of LPPM: No Kep. 1633/UN23.14/PN.01.00/2018

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Organizing Committee
The 1st International Conference on Sustainable Agriculture for Rural Development 2018 (1st ICSARD 2018)
Faculty of Agriculture - Jenderal Soedirman University
Jl. Dr. Soeparno, Karangwangkal, Purwokerto, Indonesia 53123
Web: bit.ly/icsard2020unsoed; Email: icsard@unsoed.ac.id

LETTER OF ACCEPTANCE

September 21, 2018

Dear Erminawati, Rifda Naufalin, I Sitoresmi, W Sidik and A Bachtiar

The organizing committee of the 1st International Conference on Sustainable Agriculture for Rural Development (1st ICSARD) 2018 is pleased to inform you that the submitted abstract entitled:

Antioxidant activity of microencapsulated lemongrass (*Cymbopugon citratus*) extract

has been accepted for Oral Presentation based on the peer-review by the scientific committee of 1st ICSARD, which will be held virtually on September 21, 2018. The abstract will be appeared in the book of program and will be available for all participants of the conference. We would like to thank for your contribution in the 1st ICSARD 2018 and look forward to your participation in this event.

Best regards,

Susanto Budi Sulistyo, PhD.
Chairman of 1st ICSARD Committee

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International Conference on Sustainable Agriculture for Rural Development

The Committee of
International Conference on Sustainable Agriculture for Rural Development 2018
(ICSARD-2018)

CERTIFICATE

Awarded to

Rifda Naufalin

as

Presenter

in International Conference on Sustainable Agriculture for Rural Development 2018 (ICSARD 2018) on 23 - 24 October 2018 at Java Heritage Hotel, Purwokerto, Indonesia

Dr. Ir. Anisur Rosyad, M.S.
Dean of Faculty of Agriculture
Jenderal Soedirman University

Susanto Budi Sulistyo, S.TP.,M.Si.,Ph.D
Chairman of ICSARD 2018

Meeting Schedule of ICSARD 2018, 23-24 October 2018
Java Heritage Hotel, Purwokerto, Indonesia

DAY 1 – Tuesday, 23 October 2018		
Time	**Session**	**Room**
08:00-09:00	**Registration**	**Khrisna Ballroom**
09:00-10:00	**Opening Ceremony**	**Khrisna Ballroom**
	Traditional Dance	
	National Anthem "Indonesia Raya"	
	Prayer	
	1. Report by General Chairman	
	2. Welcoming Remark by the Rector of Jenderal Soedirman University	
	3. MoU Signing between Faculty of Agriculture Jenderal Soedirman University and Faculty of Agriculture Saga University	
	4. Photo Session	
10:00-10:15	**Coffee Break**	**Khrisna Ballroom**
10:15-12:00	**Plenary 1** Chairman : M. Nazarudin Budiono, M.Sc. Notulen : Dr. Eni Sumarni	**Khrisna Ballroom**
	Invited Speakers	
10:15-10:40	1. Prof. Dr. Shao Hui Zheng (Saga University, Japan) "*The Role of Nitrogen Nutrition on Monocarpic Senescence in Soybean"*	
10:40-11:05	2. Prof. Dr. Rindit Pambayun (Sriwijaya University, Indonesia) *"Challenging on Global Food Safety, Quality and Security"*	
11:05-11:30	3. Prof. Loekas Soesanto, Ph.D (Jenderal Soedirman University, Indonesia) *"Organic Pesticides: The Best Solution for Controlling Plant Pests and Diseases"*	
11:30-12:10	Discussion	
12:10-13:30	**Lunch**	**Ambalika Restaurant**
13:30-15:00	**Plenary 2** Chairman : Ahadiyat Yugi R, D.Tech.Sc Notulen : Riana Listanti, M.Sc	**Khrisna Ballroom**
	Invited Speakers	
13:30-13:55	1. Dr. Tuyen Chan Kha (Nong Lam University, Viet Nam) *"An Application of Encapsulation Technology for Bioactive Compounds: Trend and Prospect"*	
13:55-14:20	2. Prof. Totok Agung DH, Ph.D (Jenderal Soedirman University, Indonesia) "*Crop Production Improvement in Rainfed Land by Using Crop Pattern Approach*	
14:20-15:00	Discussion	
15:00-15:20	**Coffee break**	**Arjuna 1-5**
15:20-17:30	**Parallel 1 (See detail parallel section)**	**Arjuna 1-5**

17:30-17.35	**Closing Day 1**	**Arjuna 1-5**
19:00-21:00	**Dinner for Jenderal Soedirman University Representatives & Invited Speakers**	**Ambalika Restaurant**
DAY 2 – Wednesday, 24 October 2018		
Time	**Session**	**Room**
07:30-08:30	**Registration**	**Khrisna Ballroom**
08:30-10:15	**Plenary 3** Chairman : Krissandi Wijaya, Ph.D Notulen : Indah Widyarini, MP	**Khrisna Ballroom**
08:30-08.55	1. Prof. Dr. Robert Edwin Paull (University of Hawai'i at Manoa) *"Postharvest Losses and Safety of Fruits and Vegetables for Enhanced Sustainability"*	
08:55-09:20	2. Prof. Lilik Soetiarso, Ph.D (Gadjah Mada University, Indonesia) *"Development of Selective Precision Agriculture in Indonesia Towards Industry Revolution 4.0"*	
09:20-09:45	3. Prof. Dr. Ahmad Yunus (Sebelas Maret University, Indonesia) *"The Role of Sustainable Agriculture and Biotechnology on Agriculture Production"*	
09:45-10:15	Discussion	
10:15-10:30	Coffee break	**Khrisna Ballroom**
10:30-12:00	**Parallel 2 (See detail parallel section)**	**Arjuna 1-5**
12:00-13:00	**Lunch**	**Ambalika Restaurant**
13:00-14:00	**Parallel 3 (See detail parallel section)**	**Arjuna 1-5**
14:00-15:10	**Parallel 4 (See detail parallel section)**	**Arjuna 1-5**
15:10-15:30	**Coffee break**	**Khrisna Ballroom**
15:30-16:00	**Closing Ceremony**	**Khrisna Ballroom**
	Announcement of best presenter award	
	Closing remark by Dean of Agriculture Faculty, Jenderal Soedirman University	
DAY 3 – Thursday, 25 October 2018		
07:00-19:00	**Excursion Tour to Tambi Agrotourism and Dieng Plateau**	

Room: Arjuna 1

DAY 1 – Tuesday, 23 October 2018					
No	**Time**	**Paper ID**	**Title**	**Authors**	**Affiliation**
Parallel 1 Chairman: Budi Prakoso, D.Tech.Sc					
1.	15:20-15:30	051	Effect of Flowering Plants on Population Dynamics of Rice Stem Borers and Their Natural Enemies.	R. R. Rukmowati Brotodjojo, Taufik Arochman, Chimayatus Solichah	Faculty of Agriculture, Universitas Pembangunan Nasional "Veteran" Yogyakarta
2.	15:30-15:40	103	Effect Ethylene Inhibitor, Type of Auksin, Type of Sugar, and Duration of Pre-Cold Treatment in The Anther Culture of Local East Java Aromatic Rice Varieties	Wahyu Indra Duwi Fanata, Fragaria Vesca Paradisa, Dewi Puspa Arisandi, Bambang Sugiharto and Sholeh Avivi	Faculty of Agriculture University of Jember, Jember, Indonesia
3.	15:40-15:50	117	Test of The Resistance of Rhizobium Bacteria to Salinity for The Development of Food Legume Plants in Coastal Areas	Eny Fuskhah, Endang Dwi Purbajanti, and Syaiful Anwar	Faculty of Animal and Agricultural Sciences, Diponegoro University
4.	15:50-16:00	128	Random Amplified Polymorphic DNA (RAPD)Technique on Grouping Black Rice Germplasm	Ummi Sholikhah, Parjanto Tri Handoyo, and Ahmad Yunus	Graduate School Sebelas Maret University, Surakarta Indonesia,
5.	16:00-16:10	143	Gene Flow Study from Transgenic Crops	Tri Handoyo and Kyung-Min Kim	Center for Development of Advanced Science and Technology, University of Jember; School of Applied Biosciences, College of Agriculture & Life Science, Kyungpook National University, Daegu, South Korea
6.	16:10-16:20	144	Molecular Identification of 10 Aromatic Rice (Oryza sativa L.) Using RAPD	Nur Meli Zakiyah, Irza Guari Syah Fitri, Tri handoyo	Graduate program of Biotechnology, Jember University
7.	16:20-16:30	154	Effect of Putrescine on Callus Proliferation of Black Rice Anther	Anisa Maharani and Tri Handoyo	Graduate School of Biotechnology, University of Jember,
8.	16:30-16:40	001	The Efficacy of A Combination Herbicide Active Ingredient Metsulfuron Methyl, Ethyl	Abdul rizal AZ and Dyah Arbiwati	Faculty of Agriculture, Universitas Pembangunan

			Chlorimurone, Nattrium Garam in The Succession of Rice Weeds With Different Doses of Cow Manure		Nasional "Veteran" Yogyakarta
9.	16:40-16:50	006	Foliar Iron Application on Growth and Yield of Tomato	Amalia T Sakya, Sulandjari, Edi Purwanto	Department of Agrotechnology, Sebelas Maret University
10.	16:50-17:00	007	Morphological Characterization of Local Durian as Parent Tree in Bitingan District, Rembang	Andini Desi Sawitri, Endang Yuniastuti, Nandariyah	Sebelas Maret University
11.	17:00-17:10	014	Morfophysiology and The Yield of Two Types of Moringa Oleifera Lamk Cultivated in Madura	Catur Wasonowati, Endang Sulistyaningsih, Didik Indradewa, Budiastuti Kurniasih	Agriculture Faculty, Gadjah Mada University
12.	17:10-17:20	016	The Role of Cow Manure Fertilizer and Watering on Patchouli Plant Growth in Regosol Soil	Destiana Mustikawati, Suntoro, Pardono	Agronomy, Postgraduate Program, Universitas Sebelas Maret (UNS),
13.	17:20-17:30	017	Npk Fertilizer on Peanut and Maize Cultivation Under Agroforestry System	Djoko Purnomo, Mth Sri Budiastuti, and Amalia Tetrani Sakya	Faculty of Agriculture, Sebelas Maret University.
DAY 2 – Wednesday, 24 October 2018					
No	**Time**	**Paper ID**	**Title**	**Authors**	**Affiliation**
Parallel 2 Chairman: Imastini Dinuriah, M.Sc.					
14.	10:30-10:40	019	The Effects of Arenga Wood Fiber-Size and Nutrition Buffering Concentration on Growth and Yield of Lettuce in Substrate Hydroponic Systems	Dwi Harjoko, W.S. Dewi, Samanhudi and B. Pujiasmanto	Doctoral Program of Agriculture Science, Graduate School, Universitas Sebelas Maret,
15.	10:40-10:50	021	The Application of Chitosan Towards The Vegetative Growth of Kemiri Sunan on Marginal Land	Endah Budi Irawati, Ellen Rosyelina Sasmita and Ami Suryawati	Faculty of Agriculture UPN "Veteran" Yogyakarta
16.	10:50-11:00	022	Colchicine Quantitation Of Gloriosa Superba Seeds From Different Location and Season	F Rahmawati, Sugiyarto and A Yunus	Bioscience, Graduate Program, Universitas Sebelas Maret
17.	11:00-11:10	024	Vermicompost and Mycorrhiza Arbuscular Giving to The Growth of Artemisia Annua in The Low Land	Zulfa Lail Gaibi, Fitria Roviqowati, Ahmad Yunus, Edi Purwanto	Agriculture Faculty, University of Sebelas Maret, Surakarta

18.	11:10-11:20	028	Prospects and Problem Confrontation of Dyke Vegetable Production in Ghers of South-Western Coastal Region of Bangladesh	Jafrin Akter, Mohammad Bashir Ahmed, Md. Abdul Mannan, Md. Matiul Islam	Agrotechnology Discipline, Khulna University, Bangladesh
19.	11:20-11:30	031	Effectiveness of Phosphorus Fertilizer on Soybean Plants in The Coastal Sands Soil	Khavid Faozi, Prapto Yudono, Didik Indradewa, and Azwar Ma'as	Doctoral Program in Agricultural Sciences , Faculty of Agriculture, Gadjah Mada University
20.	11:30-11:40	034	Crop Adaptation to Enhance Food Security to Mitigate The Climate Change Impact in Draught Prone Areas for Proliferation of Unsustainability	Muhammad Ziaul Hoque, Fardus Ahamed Nasim, Md. Enamul Haque, Md. Mamunur Rashid	Institute of Urban Environment, Chinese Academy of Sciences (CAS), China; Bangladesh Agricultural Research Institute, Gazipur, Bangladesh; Consumer and Organisational Digital Analytics (CODA) Research Centre, King's Business School, King's College London, UK
21.	11:40-11:50	037	Growth Responses of Corn Cultivars on Weed and Nitrogen Application	M. Rahayu, P. Yudono, D. Indradewa, and E. Hanudin	Faculty of Agriculture, Universitas Sebelas Maret
22.	11:50-12:00	042	Eco-Friendly Antimicrobial from Rhizome Extract of Java Grass (Cyperus Rotundus L.) As One of Solution to Resolve The Problems of Post Harvest Paprika	Panji Rahmatullah	Faculty of Sunan Gunung Djati State Islamic University
	12:00-13:00	**Lunch**			
Parallel 3 Chairman: Kharisun, Ph.D					
23.	13:00-13:10	043	The Study of Efectiveness Root-Up and Concentrations on Root Growth Rapidity of Potato (*Solanum tuberosum* L.) Derived from Cutting Bud	Erny Ishartati, Sukardi, Aulia Zakia, Rudy Madianto	Agrotechnology Department University of Muhammadiyah Malang
24.	13:10-13:20	060	Selection of Short Stem Mentik Susu Rice M3	Dessy Rachmawati, Wafa Nur Hanifah, Parjanto, Ahmad Yunus	Agriculture Faculty, Universitas Sebelas Maret,

25.	13:20-13:30	063	The Growth of Artemesia Annua with Addition Blotong Tebu and Micoryza in High Land	Muhamad Fauzi Pratama , Wisesa Dwi Wijaya, Edi Purwanto, Ahmad Yunus	Agriculture Faculty, University of Sebelas Maret,
26.	13:30-13:40	065	Phenolic Acids as Potent Plant Growth Inhibitors from *Tridax procumbens* L.	Yusuf Andriana, Tran Ngoc Quy, Tran Dang Xuan	Graduate School for International Development and Cooperation, Hiroshima University, Japan; Development Center for Appropriate Technology, Indonesian Institute of Indonesia
27.	13:40-13:50	067	Relationship Between Chlorophyll Content and Spad Values in Two Cultivars of Fig (*Ficus carica* L.)	Zulias Mardinata Zulkarnaini, Siti Zaharah Sakimin, Mahmud Tengku Muda Mohamed and Hawa ZE Jaafar	Faculty of Agriculture, University Putra Malaysia, Malaysia.
28.	13:50-14:00	069	The Effect of Protected Soybean Groats and Soybean Oil as Feed Supplement on Total Gas Production	Pramono., A, M.M. Munir, M. Cahyadi, Lutojo, and E. Handayanta	Faculty of Agriculture, Universitas Sebelas Maret,
Parallel 4 Chairman: Dr. Purwanto					
29.	14:00-14:10	071	Effect of Bulb Size and Plant Spacing on Plant Growth of Union (Topo Variety)	Suwitono, Bayu, Sugiono	North Mollucas Assesment Institute For Agriculture Technology,Tidore Kepulauan city, North Mollucas
30.	14:10-14:20	109	Bio-Management of Anthracnose Disease in Chilli With Microencapsulates Containing *Bacillus Subtilis* B298	Nur Prihatiningsih, Heru Adi Djatmiko, and Erminawati	University of Jenderal Soedirman
31.	13:20-14:30	111	The Influence of Supply Chain Management to Sugarcane Farming Performance in Madura	Mokh. Rum, Dwidjono Hadi Darwanto Slamet Hartono, dan Masyhuri	Agricultural Science at Universitas Gadjah Mada Yogyakarta.
32.	14:30-14:40	114	Growth and Yield Analysis of Clones of Two Sweet Potato (*Ipomoea batatas* L.)Varieties, Biang And Awachy	Murgayanti, Anne Nuraini, Agung Karuniawan, Syariful Mubarok and Megianti Agtari	Doctoral Program of Plant Science, Faculty of Agriculture, Universitas Padjadjaran.

33.	14:40-14:50	116	Traditional Cropping Pattern and Management of Home Garden: A Lesson Learnt From Ciamis Regency, West Java Province, Indonesia	M. Siarudin	Research Institute for Technological Agroforestry Research Development and Innovation Agency Ministry of Environment and Forestry, Ciamis.
34.	14:50-15:00	118	Isolation and Characterization of Indigenous Rhizobacteria Isolated From Onion Rhizosphere in Pekanbaru Indonesia And Their In-Vitro Evaluation Against *Fusarium oxysforum* F.Sp *Cepae*	Yetti Elfina S., Hersanti, I Made Joni and Mieke Rochimi Setyawati	Faculty of Agriculture, Riau University, Pekanbaru, Riau, Indonesia
35.	15:00-15:10	119	The Effects of N-Modified Zeolites on Ammonia Volatilization and Plant Biomass in Rice Soil with Various Organic-C Contents and Water Logging Levels	Muhammad Rif'fan dan Mochammad Nazarudin Budiono	University of Jenderal Soedirman

Room: Arjuna 2

DAY 1 – Tuesday, 23 October 2018					
No	**Time**	**Paper ID**	**Title**	**Authors**	**Affiliation**
Parallel 1 Chairman: Budi Dharmawan, PhD					
1.	15:20-15:30	004	The Role of Rural Women Schools in Increasing Income, Improving Nutrition and Food Security of Rural Families, Gezira State, Sudan	Ahmed M. Abdel Rahman	Faculty of Agricultural Sciences, University of Gezira, Wad Medani, Sudan
2.	15:30-15:40	011	Effectivity and Compatibility of Azotobacter and Bacillus For Biological Control Agent of Fusarium Wilt on Banana Seedling	Ayu Proboningrum, Hadiwiyono, Salim Widono, Sholahuddin	Faculty of Agriculture, the Universitas Sebelas Maret (UNS)
3.	15:40-15:50	012	Financial Stochastic Model to Measure Minimum Rearing Capacity Laying Hen Farms	Bambang Sumanto, Dyah Ethika N, Djeimy Kusnaman	Jenderal Soedirman University
4.	15:50-16:00	018	System Dynamic Modelling of Agriculture Land Availability	Dwi Aulia Puspitaningrum	Faculty of Agriculture, University of Pembangunan Nasional (UPN)"Veteran"
5.	16:00-16:10	025	Identification of Potential Locations and Factors For Coffee Agro-Industry Development in Argopuro Mountain Area Jember	Fresty Nurmala Sari, Nita Kuswardhani, Yuli Wibowo	Agricultural Technology Faculty, University of Jember
6.	16:10-16:20	027	The Community Economic Recovery: Challenging on Restructuring Community's Livelihood on Primary Production of Post Tsunami In Aceh	Irfan Zikri, Agussabti, Elly Susanti	Faculty of Agriculture Syiah Kuala University, Banda Aceh.
7.	16:20-16:30	030	Analysis of Relationship between Production Factors of Citra Water Apple Business in Hamlet Ii Paya Salit, Langkat District	Julia Marisa and Sukma Aditya Sitepu	Faculty of Agriculture, Pembangunan Panca Budi University
8.	16:30-16:40	035	Scenario Strategy of Sustainable Directive Policy Cattle-Ruminansia-Slaughterhouse	Maya Dewi Dyah Maharani	State Civil Apparatus of Bogor City
9.	16:40-16:50	035	Profitability of Pomato and Tomato Intercropped with Some Winter Vegetables	Md. Abdul Mannan	Agrotechnology Discipline, Khulna University, Khulna, Bangladesh,
10.	16:50-17:00	038	Achieving Sustainable Agriculture Through by	Mustapit, Subekti, S., Sunartomo, A.F., & Rokhani	University of Jember, Indonesia

			Enhancing Agricultural Extension Institution		
11.	17:00-17:10	040	Development of Tertiary Irrigation Management in Gumbasa Irrigation Area, Sigi, Central Sulawesi, Indonesia	Jabal Tarik Ibrahim, Nugroho Tri Waskitho, Sitti Rahma Ma'mun, Ary Bakhtiar	Faculty of Agriculture and Animal Husbandry, University of Muhammadiyah Malang
12.	17:10-17:20	041	Evaluation of Irrigation System Intangible Assets in Jombang Regency, East Java, Indonesia	Nugroho Tri Waskitho, Jabal Tarik Ibrahim, Dyah Erny Widiyastuti, Ary Bakhtiar	Faculty of Agriculture and Animal Husbandry, University of Muhammadiyah Malang
13.	17:20-17:30	045	Marketing Channel Efficiency of Robusta Coffee in Argopuro Mountain Area, Jember Regency	Ratnawati, Nita Kuswardhani, Ida Bagus Suryaningrat, Joko Sumarno	Technology Faculty, Universitas Jember
DAY 2 – Wednesday, 24 October 2018					
No	**Time**	**Paper ID**	**Title**	**Authors**	**Affiliation**
Parallel 2 Chairman: Dr. Djeimy Kusnaman					
14.	10:30-10:40	055	Impact of Sugar Import on Sugarcane Production and Domestic Sugar Prices	Safrida, Sofyan, Adawiya Taufani, Irfan Zikri	Faculty of Agriculture Syiah Kuala University, Banda Aceh
15.	10:40-10:50	056	Analysis of Relationship Between Production Factors	Sukma Aditya Sitepu and Julia Marisa	Faculty of Sains and Technology, Pembangunan Panca Budi University
16.	10:50-11:00	062	Economic Aspects of Soybean Farming Sustainability	Wiludjeng Roessali, Titik Ekowati, Edy Prasetyo and Mukson	Faculty of Animal and Agricultural Sciences, Diponegoro University
17.	11:00-11:10	066	Study on Food Habits and Local Concept of Household Food Security The Case of Fishery	Zulfanita, Istiko Agus W, Hanung Dhidhik, Budi Setiawan	Universitas Muhammadiyah Purworejo
18.	11:10-11:20	073	The Influence of The Image of Chocolate Origin (Domestic and Imported)	B S Muhammad, D Maulana-Riduwan, D Hunaefi	Department of Food Science and Technology, Bogor Agricultural University
19.	11:20-11:30	077	The Replanting of Smallholders_ Palm Oil Plantation	Ira Wahyuni Syarfi, Melinda Noer, Ami Sukma Utami	Agriculture Faculty of Andalah University
20.	11:30-11:40	079	The Reasons Why Farmers Not to Adopt Sri (System of Rice Intensification) as	Poppy Arsil, Ardiansyah, Sidharta Sahirman, Hety	Agricultural Department, Jenderal Soedirman University

			Sustainable Agricultural Practices	Handayani Hidayat	
21.	11:40-11:50	082	Negotiation Strategies among Stakeholder on *Lygodium circinnatum* Marketing in Lombok and Bali	Rubangi Al Hasan, I Wayan Widyana Susila	Research and Development Institute of Non Timber Forest Product Technology West Lombok, West Nusa Tenggara
22.	11:50-12:00	087	Factors Affecting Entrepreneurial Intentions among Beef Cattle Farmers	Sutrisno Hadi Purnomo, Endang Tri Rahayu, Ayu Intan Sari, Shanti Emawati	Faculty of Agriculture, Universitas Sebelas Maret
	12:00-13:00	**Lunch**			
Parallel 3 Chairman: Akhmad Rizqul K., M.Sc.					
23.	13:00-13:10	088	Evaluation of Supply Chain Management Model of Organic Lettuce Produced in Rural Areas	Suyono, Budi Dharmawan, Agus Sutanto, Mujiono, Tarjoko	Agricultural Faculty, Jenderal Soedirman University
24.	13:10-13:20	090	Factors Affecting Local Food Purchasing Behaviour: A Conceptual Framework	Poppy Arsil, Ardiansyah, Tri yanto	Agricultural Department, Universitas Jenderal Soedirman
25.	13:20-13:30	095	Functional Identity and Food Security on Batu's Apple Farmers	Drajat Tri Kartono	Department of Educational Sociology And Anthropology, Universitas Sebelas Maret
26.	13:30-13:40	097	Adaptation Capacity and Food Security of Fishermen_S Household	Budi Setiawan, Zulfanita, Istiko AW, Hanung Dhidhik	Universitas Muhammadiyah Purworejo
27.	13:40-13:50	102	Technological Capability and Business Success: The Mediating Role of Innovation	Endah Rahayu Lestari dan Friska Lutfiana Ardianti	Faculty of Agricultural Technology, Universitas Brawijaya,
28.	13:50-14:00	113	Food Consumption Pattern of Poor Household in Cilongok Sub District, Banyumas Regency	Alpha Nadeira M. and Altri Mulyani	Faculty of Agricultural, Jendral Soedirman University
Parallel 4 Chairman: Alpha Nadeira, MP					
29.	14:00-14:10	108	Development Strategy of Village Owned Enterprises (Bumdes) Mitra Sejahtera: A Case in Cibunut Village Argapura District of Majalengka	Jaka Sulaksana	University of Majalengka
30.	14:10-14:20	112	A Model Framework for Assessing The Risks in The Agri-Food Supply	S. Anwar	Department of Agro-industrial Logistic

			Chain: A Comparison of The Fuzzy Bow-Tie Analysis and Bayesian Network Approach		Management, Polytechnic of ATI Padang, Padang, Indonesia
31.	13:20-14:30	131	The Influence of Entrepreneurship Characteristics and Competence on Farmers' Entrepreneurial Intention in The Border Region of North Borneo	Ahmad Mubarak, Irham, Jangkung H.M., and Slamet Hartono	Agriculture Faculty of Tarakan Borneo University
32.	14:30-14:40	139	Adoption Behavior of True Shallot Seed Technology and The Factors Which Its Influence in Central Java	Wiludjeng Roessali, Endang Dwi Purbayanti, Tutik Dalmiyatun	Faculty of Animal and Agricultural Sciences, Diponegoro University
33.	14:40-14:50	147	Efficiency of Organic Rice Semi Organic with Translog Stochastic Frontier Analysis in Bantul Indonesia	Nur Rahmawati and Triyono	Departement of Agribusiness Universitas Muhammadiyah Yogyakarta,
34.	14:50-15:00	151	Rice Farmers Perception Toward Farm Cards Utilization in Pekalongan	Susanawati, Indardi, Amalia Widya Pangestika	Faculty of Agriculture, Universitas Muhammadiyah Yogyakarta
35.	15:00-15:10	160	Formulation of Protection Policy for Sustainable Food Land Agriculture	Wahyuningrat, Tenang Haryanto, Slamet Rosyadi, Mite Setiansah	Jenderal Soedirman University

Room: Arjuna 3

DAY 1 – Tuesday, 23 October 2018					
No	**Time**	**Paper ID**	**Title**	**Authors**	**Affiliation**
Parallel 1 Chairman: Condrowibowo, PhD					
1.	15:20-15:30	008	Chemical Quality of Sheep Meat on Longissimus Dorsi Muscles With Addition of Saponification of Animal and Vegetable Oil in Ration	A. K. Wati, S. D. Widyawati, W.P.S. Suprayogi, J. Riyanto	Faculty of Agriculture, Universitas Sebelas Maret
2.	15:30-15:40	009	The Use of Saponification of Animal And Vegetable Oils in The Ration on The Physical Quality of Sheep Meat on Biceps Femoris Muscles	J. Riyanto, S. D. Widyawati, W.P.S. Suprayogi, A. K. Wati	Faculty of Agriculture, Universitas Sebelas Maret
3.	15:40-15:50	010	The Development of Taro Flour and Arrowroot Flour Snack Bar With Banana Bud Flour Supplementation as Snack for Diabetes Patients	Arighi Raka Priatama, Indah Nuraeni, Saryono	Ilmu Gizi, Universitas Jenderal Soedirman
4.	15:50-16:00	023	Identification B-Myrcene and Ar-Turmerone in Turmeric Grown in Banyumas District using Molecularly Imprinted Polymers and Quartz Crystal Microbalance Gas Sensor	Fajar Hardoyono, Kikin Windhani, Herman Sambodo, Hary Pudjianto	Faculty of Islamic Education and Teaching Sciences,Institut Agama Islam Negeri Purwokerto
5.	16:00-16:10	026	Characterization Nutritional Value Slice Jam of Tamarillo (Solanum Betaceum Cav.) and Watermelon Albedo as Complementary Food for School Childern	Indah Nuraeni, Budi Sustriawan, Atikah Proverawati	Health Science Faculty Jenderal Soedirman University
6.	16:10-16:20	036	Physical Quality Improvement of Coffee Robusta (Coffee Robusta Lindl) in Argopuro Mountains Area Jember	Muhammad Misbahudin, Nita Kuswardhani, Bambang Herry Purnomo	Agricultural Technology Faculty, University of Jember
7.	16:20-16:30	054	The Study ff Lactobacillus Acidophilus Drying Evaluation	Yudiastuti, SON, Sukarminah, Mardawati, Kastaman,	Faculty of Agriculture, Universitas Padjadjaran,
8.	16:30-16:40	068	Evaluation of Antibacterial Activity of Mangosteen	Adam Saepudin, Dedi Natawijaya, Elya Hartini, and Rahmat Iskandar	Faculty of Agriculture, Siliwangi University

9.	16:40-16:50	070	Glycaemic Index of Ten Indonesian Rice Cultivars	Florentina Kusmiyati, Dwi Retno Lukiwati, Budi Adi Kristanto and Bagus Herwibawa	Faculty of Animal and Agricultural Sciences, Diponegoro University
10.	16:50-17:00	078	The Type snd Distribution of Sap Preservatives Used By Farmers in Kebasen District	Karseno and Tri Yanto	Department of Agriculture Technology, Jenderal Soedirman University
11.	17:00-17:10	092	Breakfast Development Based on Jack Bean snd Analysis of Physical	Rifda Naufalin, Friska Citra Agustia, and Fadhila Hapsari	Departement of Agricultural Technology, Jenderal Soedirman University
12.	17:10-17:20	101	Date Seeds (*Phoenix dactylifera L*.) Consumption as Anti-Inflammatory And Immunostimulant: A Systematic Review	Saryono	Faculty of Health Sciences University of Jenderal Soedirman,
13.	17:20-17:30	115	Effect of Liquification Time and Enzyme Addition on Liquid Sugar Production From Sorghum By Enzymatic Hydrolysis	Kirana S. Sasmitaloka, A.B. Arif, and C. Winarti	Indonesian Center for Agricultural Postharvest Research and Development, Bogor, Indonesia
DAY 2 – Wednesday, 24 October 2018					
No	**Time**	**Paper ID**	**Title**	**Authors**	**Affiliation**
Parallel 2 Chairman: Erminawati, PhD					
14.	10:30-10:40	122	Influence of Different Extraction Methods on Physic-Chemical Characteristics and Chemical Composition of Coconut Oil (*Cocos nucifera* L.)	Ibrahim, A.I, Sarifah Nurjanah, Ade M. Kramadibrata, Rifda, Naufalin, Erminawati, and Hidayah Dwiyanti	Faculty of Agriculture, Omdurman Islamic University, Khartoum, Sudan
15.	10:40-10:50	127	Flakes Rich in Antioxidant of Jackfruit King Whole Banana *(Mussa Paradica)* and Red Bean Sprout as an Alternative Breakfast for Obesity	Hery Winarsi, Fathurrahmi Ichwan Alduaira, and Adi Amurwanto	Faculty of Health Sciences, University of Jenderal Soedirman,
16.	10:50-11:00	132	Quality of Potato Chips as Affected by Application of Edible Coating with Variation on Sorbitol Concentration	Condro Wibowo	Faculty of Agriculture, University of Jenderal Soedirman
17.	11:00-11:10	137	Application of Red Beetroot Powder as Natural Antioxidant on Chicken Sausage	Swastike W, Suryanto E., Rusman, and Jamhari	Department of Animal Science, Sebelas Maret University

18.	11:10-11:20	148	Mechanical and Barrier Properties of Tapioca Starch/Kappa Carrageenan-Based Biocompiste Film Incorporated With Coconut Crabs Chitosan Nano Fiber	Hamidin Rasulu, I Made Joni, Danar Praseptiangga, and Ari Handono Ramelan	Post Graduate Student of Agricultural Doctor Program Sebelas Maret University
19.	11:20-11:30	150	Viability of Lactic Acid Bacteria and Quality of Probiotic Cocoghurt Produced By The Variation Of Skim Milk using Starters *Lactobacillus Casei* Subsp. *Casei* R-68 And S*treptococcus Thermophilus*	Usman Pato, Yusmarini Yusuf, Ivan Pratama Panggabean, Nurul Putri Handayani, Nadia Adawiyah and Arif Nanda Kusuma	Faculty of Agriculture, Universitas Riau
20.	11:30-11:40	173	Partial Purification and Characterization of Cellulase Enzyme from Snail	Isna Rahma Dini, Fajar Restuhadi, Khaira Silaturahmi	Faculty of Agriculture, Universitas Riau
21.	11:40-11:50	175	Utilization of Extract Flour in Sirih Leaves	Hayati Soeprapto, Hadi Pranggono, Pudjiati Syarif	Faculty of Fisheries, Pekalongan University
22.	11:50-12:00	153	Quality Function Deployment in Virgin Coconut Oil Soap Design	Ervina Mela, Nur Aini, Karseno, Mustaufik, Ardiansyah, Indah Setyawati	Faculty of Agriculture, Universitas Jenderal Soedirman
	12:00-13:00	**Lunch**			
Parallel 3 Chairman:Dr. Ervina Mela Dewi					
23.	13:00-13:10	178	Antioxidant Activity of Microencapsulated Lemongrass (*Cymbopugon citratus*) Extract	Erminawati, Rifda Naufalin, Ike Sitoresmi, Wuryatmo Sidik, Nandarose Rucki and Afan Bachtiar	University of Jenderal Soedirman,
24.	13:10-13:20	179	Edible Coating Application of Kecombrang Leaves to Reduce Gourami Saussage Damage	Nurul Latifasari, Rifda Naufalin and Rumpoko Wicaksono	Faculty of Agriculture, Jenderal Soedirman University
25.	13:20-13:30	180	Antimicrobial Edible Coating Application of Kecombrang Flower Concentrate to Reduce Microbial Growth on Gouramy Fish Sausage	Frida Arina Putri, Rifda Naufalin and Rumpoko Wicaksono	Faculty of Agriculture, Jenderal Soedirman University
26.	13:30-13:40	181	Edible Coating Application on Concentrate Kecombrang Leaves Addition to Quality of Gouramy Fish Fillet	Muna Ridha Hanifah, Rifda Naufalin and Rumpoko Wicaksono	Faculty of Agriculture, Jenderal Soedirman University
27.	13:40-13:50	072	Growth of Papaya Cv. Callina Seedlings on	Diajeng Tiara Prajwalita, Slamet	Agricultural Faculty, The

			Four Types of Planting Media	Rohadi Suparto and Budi Prakoso	Jenderal Soedirman University
28.	13:50-14:00	075	Indirect Effects of Bio-Based Nutrient on Aboveground Community Structure.	Dina Wahyu Trisnawati	Faculty of Agriculture, Universitas Muhammadiyah, Yogyakarta
Parallel 4 Chairman: Dr. Rumpoko Wicaksono					
29.	14:00-14:10	076	Climate Change Adaptation and Mitigation Strategy Through Submergence Tolerance in Rice.	H L Susilawati and P Setyanto	Indonesian Agricultural Environment Research Institute, Pati, Central Java, Indonesia
30.	14:10-14:20	080	Growth and Yield of Sorghum as Affected By Fertilizer at Three Locations.	Puji Harsono, Nanik Setyowati & Prasetyo	Agriculuter Faculty of Sebelas Maret University
31.	13:20-14:30	121	Study of Interaction between Genetic Source, Harvest Time, and Storage Time in Some Mutant Varieties of Sweet Sorghum in Order to Support Future Bioindustry Development	Amin Nur, Karlina Syahruddin, and Roy Efendy	Balai Penelitian Tanaman Serealia, Maros
32.	14:30-14:40	124	Effects of Media, Plant Growth Regulator And Polyamine on In Vitro Anther Culture of *Citrus reticulata*	Prita Sari Dewi, Ponendi Hidayat, Ida Widiyawati, and Nikmatul Qori'ah	Faculty of Agriculture Jenderal Soedirman University, Indonesia
33.	14:40-14:50	125	Efforts to Improve The Growth of Longan Plant Grafting *(Dimocarpuslongan*lour.*)* in Indonesia With Application of Fertilizer	Etik Wukir Tini, Prasmaji Suistyanto and Rr. Pudji Hastuti Purwantini	Faculty of Agriculture Jenderal Soedirman University, Indonesia
34.	14:50-15:00	129	The Combination of Bioslurry and Liquid Nano-Silica Based on Rice Husk Waste on Brown Rice (*Oryza nirvara* L.)	Nur Fathurahman Ridwan, Gilang Vaza Benatar, and Yeyet Nurhayati	Master of Biotechnology, Graduate School, Universitas Gadjah Mada
35.	15:00-15:10	130	The Effects of Combinations of NH_4^+- and H^+-Saturated Zeolites on Phosphate Rocks Dissolution and Nh_4^+ Release Pattern	Mochammad Nazarudin Budiono and Peter van Straaten	Faculty of Agriculture, Jenderal Soedirman University; School of Environmental Science, University of Guelph, Canada

Room: Arjuna 4

DAY 1 – Tuesday, 23 October 2018					
No	**Time**	**Paper ID**	**Title**	**Authors**	**Affiliation**
Parallel 1 Chairman: Ardiansyah, Ph.D					
1.	15:20-15:30	005	Phytotoxic Effects of Biologically Treated And Untreated Wastewater From Pulp-And-Paper Industry on Germination and Growth of Brassica Campestris	Sadat Mazhar and Allah Ditta	Department for Innovation in Biological, Agro-food and Forest Systems, University of Tuscia, Viterbo, Italy; School of Biological Sciences, The University of Western Australia
2.	15:30-15:40	015	Readiness of Farmer Institutions in Facing Environmental Disruption: The Case of The Participation Of Farmer Water-Users in Maintaining Trash-Polluted Irrigation, Indonesia	Dede Sulaeman, Sigit Supadmo Arif, Sudarmadji	Post Graduate School, Gadjah Mada University, Yogyakarta
3.	15:40-15:50	039	Supply Chain Risk Potensial of Smallholder Robusta Coffee Farmers in Agropuro Mountain Area	Novita Fitri Yulian, Nita Kuswardhani	Agricultural Technology Faculty, Universitas Jember
4.	15:50-16:00	061	Effects of LCC Mucuna Bracteata on Soil Physical Characteristic	Wawan	Faculty of Agriculture, Universitas Riau
5.	16:00-16:10	083	Measuring The Coefficient of Unit Surface Conductance of Steel Balls For Non Cooking Oil Frying Application	Siswantoro, and Agus Margiwiyatno	Faculty of Agriculture, Jenderal Soedirman
6.	16:10-16:20	098	Using of Gendruwo Waste (Sterculia Foetida Linn.) as Briquettes	Endang Yuniastuti, Marshelina Noor Indah Delfianti	Faculty of Agriculture, Sebelas Maret University
7.	16:20-16:30	105	Identification of Diseases in Strawberry Leaves Using Image Processing Technique and Ensemble Neural Networks	Susanto B. Sulistyo, Krissandi Wijaya, Purwoko H. Kuncoro, Rostaman, Wai Lok Woo	Faculty of Agriculture, Jenderal Soedirman University, Indonesia; Newcastle University, UK
8.	16:30-16:40	120	Effect of Mulches-Fertilizers Application on Soil and Nutrient Losses Over Biochar Applied Potato Land Under Horizontal Ridge System	Krissandi Wijaya and Purwoko Hari Kuncoro	Faculty of Agriculture, Jenderal Soedirman University,

					Purwokerto, Indonesia
9.	16:40-16:50	134	Comparison of Methodologies for Moisture Determination in Hard Corn (Zea Mays L.)	Héctor Abel Palacios Cabrera, Daniela Monserrat Villamarin Rodríguez, Wilson Vásquez Castillo and Jose Sergio Velasquez Carrera	Universidad de Las Américas, Ecuador
10.	16:50-17:00	135	Comparison of Moisture Methods in Two Varieties of Corn, Morocho and Soft Corn (Zea Mays L.)	Héctor Abel Palacios Cabrera, Daniela Monserrat Villamarin Rodríguez, Wilson Vásquez Castillo and Jose Sergio Velasquez Carrera	Universidad de Las Américas, Ecuador
11.	17:00-17:10	145	Consentration of Cao Catalyst From Chicken Eggshell In ransesterification Process of Pangi Seed Oil Biodiesel	Farida Hanum Hamzah	Agriculture Faculty of Riau University
12.	17:10-17:20	159	Mapping of Water Catchment Areas	Lis Noer Aini, Syifa Marya Ulfah, Bambang Heri Isnawan	Faculty of Agriculture Universitas Muhammadiyah Yogyakarta
13.	17:20-17:30	163	Spatial and Temporal Change of Rainfall Pattern	Nuzul Hijri Darlan, Bayu Dwi Apri Nugroho, Sigit Supadmo Arif , and Putu Sudira	Faculty of Agricultural Technology, Universitas Gadjah Mada, Yogyakarta, Indonesia
DAY 2 – Wednesday, 24 October 2018					
No	**Time**	**Paper ID**	**Title**	**Authors**	**Affiliation**
Parallel 2 Chairman: Poppy Arsil, PhD					
14.	10:30-10:40	002	Erosion and Surface Runoff From Forest and Oil Palm Plantation in Jalemu Watershed, Gunung Mas Regency, Central Kalimantan Province	Adi Jaya, Cakra Birawa, Fengky F. Adji, Mochamad Anwar	Faculty of Agriculture, The University of Palangka Raya,
15.	10:40-10:50	166	Time Based Automatic System of Drip and Sprinkler Irrigation	Arief Sudarmaji, Sidharta Sahirman, Saparso, and Yogi Ramadhani	Agricultural Engineering, Jenderal Soedirman University
16.	10:50-11:00	167	Radiation Interception and Biomass Growth in Plant-Factory System	Ardiansyah, Eni Sumarni, Sidharta Sahirman	Agricultural Engineering, Jenderal

					Soedirman University
17.	11:00-11:10	169	Performance of Reverse Flow Biodiesel Reactor in The Production of Biodiesel	Furqon, Arief Kelik Nugroho , Rahmat Yulianto, Rd. Novan Amarta	Agricultural Engineering, Jenderal Soedirman University
18.	11:10-11:20	171	Design and Analysis of Technoeconomic of Corn Dryer With Re-Heating System For Farmer's Scale	Ropiudin, Siswantoro, Krissandi Wijaya, Masrukhi, Purwoko Hari Kuncoro, Susanto Budi Sulistyo, Arief Sudarmaji, and Furqon	Agricultural Engineering, Jenderal Soedirman University
19.	11:20-11:30	044	In Vitro Shoot Initiation of Onion with Various Concentrations of Seaweed Extract (*Caulerpa* Sp) and Benzylaminopurine	Ramal Yusuf, Zainuddin Basri, Hawalina Kasim, Aristan Sahirdin, Abdul Syakur, Yulianti Kalaba and Paul Kristiansen	Faculty Agriculture University Tadulako
20.	11:30-11:40	046	In Vitro Evaluation of Some Homeopathic Medicines Against *Colletotrichum musae* Causal Agent of Anthracnose of Banana	M.R. Islam, S. Hoque and A.K. Ghosh	Agrotechnology Discipline, Khulna University, Bangladesh
21.	11:40-11:50	047	Pollinator Diversity and Soybean Productivity with Flowering Plant (Crotalaria and Rosella)	Sholahuddin,Retno Wijayanti Retna Bandriyati A, Supriyadi, Dhealaras Widyaningrum	Agricultural Faculty Sebelas Maret University Surakarta
22.	11:50-12:00	048	Brown Plant Hoppers Population in Some Local Rice Varieties Based on Sellulosa, Hemicellulosa And Lignin Content	Retno Wijayanti, Sholahuddin, Supriyadi, SH Poromarto	Post graduate Programe , Faculty of Agriculture UNS
	12:00-13:00	**Lunch**			
Parallel 3 Chairman: Arief Sudarmaji, Ph.D					
23.	13:00-13:10	081	The Antioxidant Activity and Plant Growth Inhibitory Activity of Purple Dioscorea Alata Powder.	Ratnaningsih, Sakae Suzuki, Yoshiharu Fujii	Indonesian Center for Agricultural Postharvest Research and Development, Bogor
24.	13:10-13:20	086	Agronomic Performance of F4 Population of Rice Breeding Lines Derived From The Cross of Black Rice	Suprayogi, Mei Ary Praptiwi, Ahmad Iqbal, Tri Joko Agustono	Faculty of Graduate Studies, Jenderal Soedirman University
25.	13:20-13:30	089	*Trichoderma* Sp. on Shallots on The Coastal Sandy Land	Tuti Setyaningrum, Didik Indradewa, Achmadi	Agriculture Faculty, University of

				Priyatmojo, Endang Sulistyaningsih	Pembangunan Nasional "Veteran"
26.	13:30-13:40	091	Identification of The Ultisol Land Indigenus Bacteria from Banyumas Regency	Sapto Nugroho Hadi, Prita Sari Dewi, Kartini	Faculty of Agriculture, Jenderal Soedirman University
27.	13:40-13:50	093	The Influence of Fruit Thinning on Fruit Drop and Quality of Citrus	Sakhidin, Anung Slamet Dwi Purwantono, and Slamet Rohadi Suparto	Faculty of Agriculture, Jenderal Soedirman University
28.	13:50-14:00	094	The Mutants Short-Stemmed Selection of M4 Generation "Mentik Susu" Rice	Mutiara Ferisia Saweho, Ahmad Yunus, Edi Purwanto	Agriculture Faculty, Universitas Sebelas Maret
Parallel 4 Chairman: Afik Hardanto, Ph.D					
29.	14:00-14:10	133	Molecular Analysis of Pathogen Bacterial Leaf Blight (*Xanthomonas oryzae* Pv. *oryzae*) and Resistance Gene Detection to Bacterial Leaf Blight of Local Rice Varieties (Oryza Sativa) in Situbondo and Jember	Rasmiyana, Hardian Susilo Addy, and Erlia Narulita	Magister Biotechnology, Jember University,
30.	14:10-14:20	138	The Percentage of Haploid Embryos Resulting from The Crossing of Two White-Seeded Genotypes with Three Dark-Seeded Genotypes of Maize	Sutoyo, Benni Satria, and Rezi Arselfi	Faculty of Agriculture, Andalas University
31.	13:20-14:30	149	Application of Organic Fertilizer and Microbial Agents to Reduce Inorganic Fertilizer on Plant Growth and Yield of Rice in Sri (System Of Rice Intensification)	Yugi R. Ahadiyat, Tri Harjoso	Faculty of Agriculture, Universitas Jenderal Soedirman
32.	14:30-14:40	152	Growth, Nitrate Reductase Activity and Chlorophyll of Peanuts	Endang Dwi Purbajanti, Widyati Slamet, Eny Fuskhah	Faculty of Animal and Agricultural Sciences, Diponegoro University
33.	14:40-14:50	155	Intercropping of *Zingiber officinale var. amarum* on Teak Silviculture	Aris Sudomo, Gerhard. E Sebastian, Diana Prameswari and James M. Roshetko	Agroforestry Research and Development Center-Environmental and Forestry Ministry; World Agroforestry Center-ICRAF

34.	14:50-15:00	156	Organic Palm Frond Fertiliser (OPFF) Improved The Growth	Ikhsan Hasibuan, Sunarti and Sarina	Faculty of Agriculture, University of Hazairin
35.	15:00-15:10	157	Responses of Three Varieties of Lettuce to Nutrient Solutions	Noor Farid and Mochammad Nazarudin Budiono	Faculty of Agriculture, Jenderal Soedirman University

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DAY 1 – Tuesday, 23 October 2018					
No	**Time**	**Paper ID**	**Title**	**Authors**	**Affiliation**
Parallel 1 Chairman: Sidharta Sahirman, PhD					
1.	15:20-15:30	020	The Local Potential-Based Mangrove Ecotourism Development Model that Supports Segara Anakan Agribusiness and Agriculture	Edy Suyanto, Fx. Wardiyono, Tri Wuryaningsih, Tri Rini Widyastuti, Soetji Lestari	Social and Political Sciences and Environmental Master Program Unsoed
2.	15:30-15:40	029	The Nutritional Quality of Chuck and Leg Meat Thin-Tailed Sheep Fattened with Protected Aldehyde Suplementation in The Rations	J. Riyanto, Sudibya, S.D. Widyawati, A.Fatmasar, and A.A. Tyastuti	Agriculture faculty, Sebelas Maret University,
3.	15:40-15:50	074	Effects of Five Indonesian Herbals Supplement on Milk Production	Dian Wahyu Harjanti, Fajar Wahyono and Diana Nur Afifah	Department of Animal Science, Faculty of Animal and Agricultural Sciences, Diponegoro
4.	15:50-16:00	084	Effects of Supplementation of Cellulase	Sudibya and J.Riyanto	Faculty Agriculture Sebelas Maret University
5.	16:00-16:10	085	Training Effectiveness of Beef Cattle Ration Formulation	Sudiyono , S.H. Purnomo, Suwarto, S. Emawati, A.I. Sari	Faculty of Agriculture, Sebelas Maret University
6.	16:10-16:20	126	Social Capital Analysis of Beef Cattle Breeding Based on Village Breeding Centre In Gondangrejo Subdistrict, Karanganyar District	Ayu Intan Sari, Suwarto, Endang Tri Rahayu, Shanti Emawati, and Sutrisno Hadi Purnomo	Faculty of Agriculture, Sebelas Maret University, Indonesia
7.	16:20-16:30	136	A Technique of Assessing The Status of Sustainability of Resources	Suharno, Nurul Anwar and Emmy Saraswati	Faculty of Economics and Business, Jenderal Soedirman University
8.	16:30-16:40	140	The Travel Cost Approach for The Demand Natural Tourism Object of Cipendok Waterfall	Suharno and Sudjarwanto	Faculty of Economics and Business, Jenderal Soedirman University
9.	16:40-16:50	141	Human Capital Analysis of Leather Tatah Sungging Based On Local Cultural Heritage in Sukoharjo Regency, Indonesia	Endang Siti Rahayu, Sutrisno Hadi Purnomo, Endang Tri Rahayu, Shanti Emawati, and Ayu Intan Sari	Faculty of Agriculture, Sebelas Maret University,

10.	16:50-17:00	146	Improving The Quality of Wastewater With The Addition of Liquid Probiotics Through The Implementation of Advanced Ponds Systemi Dairy Goat Farms	Rendi Fathoni Hadi, B.S. Hertanto dan A. Kusumawati	Faculty of Agricultural, Universitas Sebelas Maret
11.	17:00-17:10	161	How Do The Indonesia Beef Cattle Farmers Perceived The Concept of Animal Welfare	Siwi Gayatri, Dian Harjanti, Tutik Dalmiyatun	Diponegoro University
12.	17:10-17:20	162	Feeding Calf Starer After Bird Can Promote Calf Performance	Mukodiningsih S, J. Achmadi, F. Wahyono, T.R.Taswanda, Sugiono and J.Ohh	Faculty of Animal and Agriculture, Diponegoro University, Semarang
13.	17:20-17:30	168	Improving Production System of Beef Cattle Agribusiness	Akhmad Sodiq, Pambudi Yuwono, Yusmi Nur Wakhidati, Muahamad Raihan, Arif Mulianto	Faculty of Animal Science, University of Jenderal Soedirman
DAY 2 – Wednesday, 24 October 2018					
No	Time	Paper ID	Title	Authors	Affiliation
Parallel 2 Chairman: Dr. Suyono					
14.	10:30-10:40	170	Indicator of Supply Chain Management Performance in Small Households Agro-Industry	Dindy Darmawati Putri, Dwidjono Hadi Darwanto, Slamet Hartono, Lestari Rahayu Waluyati	Doctoral Program in Faculty of Agriculture, Gadjah Mada University
15.	10:40-10:50	176	The Ineffective Business of Dairy Farming in Banyumas District, Central Java: Lacking of Information Cause Loss in Dairy Farming	Anisur Rosyad, Triana Yuni Astuti, Ratna Satriani	Jenderal Soedirman University, Indonesia
16.	10:50-11:00	123	Strategic Ways to Develop New Variety of Upland Rice: Case Study of Inpago Unsoed 1 in Central Java, Indonesia	Budi Dharmawan, Akhmad Rizqul Karim, and Ulfah Nurdiani	Department of Agricultural Economics and Social Sciences, Jenderal Soedirman University,
17.	11:00-11:10	049	Decomposition of Chromolaena Odorata and Straw in Fresh and Composted form to Growth and Yield of Rice	Rohmatin Agustina	University of Muhammadiyah Gresik
18.	11:10-11:20	050	In Vitro Micropropagation of Banana Cultivar Raja Bulu on Media Supplemented with Coconut Water and NAA	Wiesya Kresna Bayu Ajie, Rossa Malinda , Endang Yuniastuti, Ahmad Yunus	Agriculture Faculty, University of Sebelas Maret

19.	11:20-11:30	052	Probiotic Potential and Acceptability of Growol with Varying of Cassava Varieties	Sandi Afrianto, Muhammad Akbar Suseno, Regina Puspasari Paulina and Chatarina Wariyah	Faculty of Agroindustry, Mercu Buana University of Yogyakarta
20.	11:30-11:40	053	Effectiveness of Some Clove and Citronella Oil Based-Pesticide Formula	Setyowati Retno Djiwanti, Supriadi and Wiratno	Indonesian Agricultural Agency Research and Development Indonesian Spice and Medicinal Crop Research Institute (ISMECRI), Plant Protection Division, Bogor, Indonesia
21.	11:40-11:50	058	The Effect of Crotalaria Juncea in Coffee Ecosystem to Diversity of Insect Predators and Parasitoides	Supriyadi, Retno Wijayanti, Retna Bandriyati Arniputri, Nuri Estiy Fadho, Nurhayati Puspitarini	Agriculture Faculty, University of Sebelas Maret
22.	11:50-12:00	059	Compost and Micoryza Arbuskula Onthe Growth of Artemisia Annua in Middle Land	Yosi Putri Purwadi , Vita Tjandra, Dwi Harjoko, Ahmad Yunus	Agriculture Faculty, University of Sebelas Maret
	12:00-13:00	**Lunch**			
Parallel 3 Chairman: Dr. Saparso					
23.	13:00-13:10	096	The Effect of Concentration Nanosilica Fertilizer	Tety Suciaty, Supriyadi, Amalia T. Sakiya	Department of Agricultural Science, graduate school of Sebelas Maret university
24.	13:10-13:20	099	Growth and Development of Pigeon Pea	Elizabeth Windy Gitiara, Endang Yuniastuti, Nandariyah	Faculty of Agriculture UNS
25.	13:20-13:30	100	Propagation and Growth of Persimmon (*Diospyros kaki* L.) in Indonesia	Marshelina Noor Indah Delfianti , Endang Yuniastuti, Vita Ratri Cahyani	Faculty of Agriculture, Sebelas Maret University
26.	13:30-13:40	104	Enhanced Potatoes (*Solanum tuberosum* L.) Yield by Used Biologycal Organic Fertilizer and Soil Conservation Methods on The Slope Andisols	Tamad, L. Soesanto, and P. E. Agustin	Agriculture Faculty, The University of Jenderal Soedirman
27.	13:40-13:50	107	Evaluation of Yield Stability of Black Soybean Mutant Lines in Ten Environments	Winda Puspitasari, Tarmidzi, and Arwin	Center for Isotopes and Radiation Application,

					National Nuclear Energy Agency (PAIR, BATAN)
28.	13:50-14:00	142	The Performance of Sugar Palm (*Arenga pinnata* Merr. (Wurmb) and The Yield of Nira in Various Environmental Conditions	Rosi Widarawati, Prapto Yudono, Didik Indradewa, Sri Nuryani Hidayah Utami	Faculty of Agriculture, Universitas Jenderal Soedirman
Parallel 4 Chairman: Suprayogi, PhD					
29.	14:00-14:10	158	Morphology, Yield, Grain Quality and Mineral Contents	Heni Safitri, Buang Abdullah, Indrastuti Apri Rumanti, Sularjo, Cahyono	Indonesian Center for Rice Research,
30.	14:10-14:20	164	Observation of Root Architecture at Vegetative Stage of Drought Tolerant Rice	Untung Susanto, Wage R Rohaeni, Desi Prastika	Indonesian Center for Rice Research,
31.	13:20-14:30	165	Drought Tolerant Selection of Rice Genotypes	Untung Susanto, Wage R Rohaeni, and Nani Yunani	Indonesian Center for Rice Research,
32.	14:30-14:40	172	Screening of Fungi From Rhizosphere of Palm Plants in Peat Soil	Fifi Puspita, Isna Rahma Dini, and Dermala Sari	Faculty of Agriculture, University Riau
33.	14:40-14:50	174	Test Several Tablet Biofungicide Formulations with Active Ingredients	Fifi Puspita, Hadiwiyono, Susilo Hambeg Poromorto, Dewi Indriyani Roslim	Agriculture Science Department, Graduated School of Universitas Sebelas Maret,
34.	14:50-15:00	177	Genetic Relationships of Yardlong Bean (*Vigna unguiculata* Ssp. *sesquipedalis*) and Their F1 Progenies Based on RAPD Markers	Syaiful Anwar, Karno Karno, Florentina Kusmiyati*	Diponegoro University, Indonesia
35.	15:00-15:10	106	Composition of Planting Media and Biological Agents to Improve Physical, Chemical Properties of Soil and Lettuce (*Lactuca sativa* L.*)* Production	Kharisun, Fadillah, Mujiono, and Suciati	Agriculture Faculty, The University of Jenderal Soedirman

POSTER PRESENTATION

No	Paper ID	Title	Authors	Affiliation
1	003	Isolation and Screening of Potential Microorganism for Biofertilizers From Banana and Cassava Crop Plants Soil and Rhizosphere in Lampung	Agung Adi Nugroho, Nur Laili, Achirul Nditasari, Athoullah, Sarjiya Antonius	Laboratorium Mikrobiologi Pertanian Pusat Penelitian Biologi LIPI
2	013	The Factors Affecting of Farmer Participation in Sustainable Private Forest Management at Pajangan Sub-District, Bantul District, Special Regions Yogyakarta, Indonesia	B Widayanto, R Karsidi, Kusnandar, and J Sutrisno	Universitas Sebelas Maret (UNS)
3	032	Approach of Monocarpic Senescence Control by Nitrogen Manipulation in Mungbean and Cowpea	Md. Matiul Islam, Seijun Sakamoto, Shao-Hui Zheng	The United Graduate School of Agricultural Sciences, Kagoshima University, Japan;
4	057	Application of Amandement to Improve Nutrient Retention in The Medicinal Plant	Sulandjari, Amalia Tetrani Sakya, Jauhari Syamsiah	Agriculture Faculty, Sebelas Maret University Surakarta
5	064	Household Economics Activities of Upland Rice Farmers in Rain-Fed Farming	Wulandari Dwi Etika Rini, Mohammad Harisudin, Supriyadi, Endang Siti Rahayu	Department of Agribusiness, Universitas Pembangunan Nasional"Veteran" Yogyakarta
6	110	Taxa Status of Some Reported Plant Parasitic Nematodes in Indonesia	Setyowati Retno Djiwanti	Indonesian Agricultural Agency Research and Development Indonesian Spice and Medicinal Crop Research Institute (ISMECRI), Plant Protection Division, West Java, Indonesia