3rd International Seminar on Sciences (ISS 2016)

Sciences on Precision and Sustainable Agriculture

IOP Conference Series: Earth and Environmental Science
Volume 58

Bogor, Indonesia
4 November 2016

Editors:

Yessie Widya Sari

ISBN: 978-1-5108-3896-3
ISSN: 1755-1307
Table of contents

Volume 58

The 3rd International Seminar On Sciences "Sciences On Precision And Sustainable Agriculture" (ISS-2016)

4 November 2016, Bogor, Indonesia

Accepted papers received: 20 March 2017
Published online: 4 April 2017

Preface

011001
OPEN ACCESS
The 3rd International Seminar on Sciences: "Sciences on Precision and Sustainable Agriculture" (ISS-2016)

011002
OPEN ACCESS
Peer review statement

Oral Session Contributors

012001
OPEN ACCESS
Clustering Module in OLAP for Horticultural Crops using SpagoBI

D Putri and I S Sitanggang.....1

012002
OPEN ACCESS
Application of Graph-Theory Based Algorithm for Identifying Convective Complex Systems over Greater Jakarta basins

D E Nuryanto, E Aldrian, H Pawitan and R Hidayat.....8
Synthesis of activated carbon-nanomagnetite-pyrazolone(1-phenyl-3-methyl-5-pyrazolone) composite as adsorbent for Cd$^{2+}$

D Pratiwi, D Saprudin and E Rohaeti.....15

Outlier Detection on Hotspot Data in Riau Province using OPTICS Algorithm

N L Febriana and I S Sitanggang.....22

Segmentation of Sharia Rural Banks based on Growth of the Business Performance

B Sartono, S Rahardiantoro, C Suhaeni, E A Irianto and U Maulidya.....29

Bayesian estimation of linear and nonlinear mixed models of fertilizer dosing with independent normally distributed random components

M Masjkur and H Folmer.....36

Comparison of Freshwater Mollusc Assemblages between Dry and Rainy Season in Situ Gede System, Bogor, Indonesia

W Priawandiputra, D J Nasution and T S Prawasti.....44

Amino acid and proximate composition of fish bone gelatin from different warm-water species: A comparative study

Y Atma.....53
Enhancing Activity and Stability of Uricase from *Lactobacillus plantarum* by Zeolite immobilization

D Iswantini, N Nurhidayat and Sarah.....58

Alcohol Dehydrogenase of *Bacillus* strain for Measuring Alcohol Electrochemically

D Iswantini, N Nurhidayat and H Ferit.....65

Proposed Application of Fast Fourier Transform in Near Infra Red Based Non Invasive Blood Glucose Monitoring System


Electrical Resistivity Tomography Using Wenner β - Schlumberger Configuration for Anomaly Detection in The Soil

Y Pebriyanto, K Dahlan and Y W Sari.....78

A robustness study of student-t distributions in regression models with application to infant birth weight data in Indonesia

A Ubaidillah, K A Notodiputro, A Kurnia, A Fitrianto and I W Mangku.....84

Bias Reduction in Estimating Variance Components of Phytoplankton Existence at Na Thap River Based on Logistics Linear Mixed Models

R Arisanti, K A Notodiputro, K Sadik and A Lim.....94
Robustness of location estimators under $t$-distributions: a literature review

C Sumarni, K Sadik, K A Notodiputro and B Sartono.....100

Characterization and Identification of Phosphate Solubilizing Bacteria Isolate GPC3.7 from Limestone Mining Region

D Fitriyanti, N R Mubarik and A Tjahjoleksono.....111

A Comparative Study of Imputation Methods for Estimation of Missing Values of Per Capita Expenditure in Central Java

Y Susianto, K A Notodiputro, A Kurnia and H Wijayanto.....119

Landscape Function of Post Tin-Mining Land After Reclamation in Bangka, Indonesia

H F Putra, Sulistijorini and N S Aryanti.....128

Model Averaging for Predicting the Exposure to Aflatoxin B$_1$ Using DNA Methylation in White Blood Cells of Infants

S Rahardiantoro, B Sartono and A Kurnia.....135

Clustering Information of Non-Sampled Area in Small Area Estimation of Poverty Indicators

V Y Sundara, A Kurnia and K Sadik.....139
012021
OPEN ACCESS
Infra Red Light Emitting Diode in 1200 nm Range have Moderate Performance in Detecting Glucose in Human Blood Glucose Model


012022
OPEN ACCESS
Antioxidant and Cytotoxic Activity of Phyllanthus acidus Fruit Extracts

D Andrianto, W Widianti and M Bintang.....150

012023
OPEN ACCESS
Influence of Explant Position on Growth of Talinum paniculatum Gaertn. Adventitious Root in Solid Medium and Enhance Production Biomass in Balloon Type Bubble Bioreactor

M H Solim, A N Kristanti and Y S W Manuhara.....155

012024
OPEN ACCESS
Regional Analysis of Prone Drought Areas under Future Climate Change Scenarios: Case Study Agropolitan of Malang District

Perdinan, R F Adi and E Y Arini.....164

012025
OPEN ACCESS
Two-strain Tuberculosis Transmission Model under Three Control Strategies

S N Rayhan, T Bakhtiar and Jaharuddin.....172

012026
OPEN ACCESS
Effect of Application Propolis as Biocoating on the Physical and Chemical Properties of Tomatoes Stored at Room Temperature

R E Putra, S Khairannisa and I Kinasih.....181
Optimal Control of Malaria Transmission using Insecticide Treated Nets and Spraying
D Athina, T Bakhtiar and Jaharuddin.....186

Multivariable Semiparametric Regression Model with Combined Estimator of Fourier Series and Kernel
Khaerun Nisa, I Nyoman Budiantara and Agnes Tuti Rumiati.....193

Ensemble ROCK Methods and Ensemble SWFM Methods for Clustering of Cross Citrus Accessions Based on Mixed Numerical and Categorical Dataset
Alvionita, Sutikno and A Suharsono.....199

Climate Changes Projection for Land and Forest Fire Risk Assessment in West Kalimantan
S D Jadmiko, D Murdiyarso and A Faqih.....209

Synthetic Over Sampling Methods for Handling Class Imbalanced Problems : A Review
B Santoso, H Wijayanto, K A Notodiputro and B Sartono.....217

Clustering box office movie with Partition Around Medoids (PAM) Algorithm based on Text Mining of Indonesian subtitle
A D Alfarizy, Indahwati and B Sartono.....225
012033
OPEN ACCESS
Application of hourly radar-gauge merging method for quantitative precipitation estimates
A Wardhana, H Pawitan and B D Dasanto.....233

012034
OPEN ACCESS
Data Cubes Integration in Spatial OLAP for Agricultural Commodities
A I Putri and I S Sitanggang.....240

012035
OPEN ACCESS
North American Multi Model Ensemble (NMME) Performance of Monthly Precipitation Forecast over South Sulawesi, Indonesia
A M Setiawan, Y Koesmaryono, A Faqih and D Gunawan.....248

012036
OPEN ACCESS
Use of Drought Index and Crop Modelling for Drought Impacts Analysis on Maize (Zea mays L.) Yield Loss in Bandung District
E Kurniasih, Impron and Perdinan.....260

012037
OPEN ACCESS
Preliminary Study of Nocturnal Rainfall Mechanism over Semi Closed Equatorial Oceans as observed by TRMM-PR
F Alfahmi, R Hidayat, R Boer and Perdinan.....269

012038
OPEN ACCESS
Trajectory and Concentration PM$_{10}$ on Forest and Vegetation Peat-Fire HYSPLIT Model Outputs and Observations (Period: September – October 2015)
Khairullah, S Effendy and E E S Makmur.....276
Descriptive Statistics and Cluster Analysis for Extreme Rainfall in Java Island

K E Komalasari, H Pawitan and A Faqih.....289

Exposure to Drought: Duration, Severity and Intensity (Java, Bali and Nusa Tenggara)

N L Adhyani, T June and A Sopaheluwakan.....298

Mapping Extreme Rain Conditions in Sumatra by Influence Global Conditions

S Supriyadi, R Hidayati, R Hidayat and A Sopaheluwakan.....312

Influence of Climate Variability on Brown Planthopper Population Dynamics and Development Time

S Romadhon, Y Koesmaryono and R Hidayati.....322

Dry spell frequency in West Java, Indonesia

V I Purnaningtyas, R Boer and A Faqih.....329

Developing Vulnerability Analysis Method for Climate Change Adaptation on Agropolitan Region in Malang District

Y Sugiarto, Perdinan, T Atmaja and A Wibowo.....334
012045
OPEN ACCESS
Study of the effectiveness of several tree canopy types on roadside green belt in influencing the distribution of NO₂ gas emitted from transportation

R D Desyana, B Sulistyantara, N Nasrullah and I S Fatimah.....342

012046
OPEN ACCESS
Enzymatic activity of Glucose Oxidase from Aspergillus niger IPBCC.08.610 On Modified Carbon Paste Electrode as Glucose Biosensor

T Rohmayanti, L Ambarsari and A Maddu.....351

012047
OPEN ACCESS
Effect of Manganese Addition on the Structure, Magnetic Properties and Microwave Absorption of La₀.₈Ba₀.₂MnₓFe₉₋₄ₓTiₓ₋₄ₓO₃

W A Adi, M N Indro and A A Kusumastuti.....357

012048
OPEN ACCESS
Secretory Structure, Histochemistry and Phytochemistry Analyses of Stimulant Plant

C Umah, Dorly and Y C Sulistyaningsih.....364

012049
OPEN ACCESS
Study of Structural and Electrical Conductivity of Sugarcane Bagasse-Carbon with Hydrothermal Carbonization

M Kurniati, D Nurhayati and A Maddu.....373

012050
OPEN ACCESS
Detection of vitamin b₁ (thiamine) using modified carbon paste electrodes with polypyrrole

N M Muppariqoh, W T Wahyuni and B R Putra.....379
A Statistical Bias Correction Tool for Generating Climate Change Scenarios in Indonesia based on CMIP5 Datasets
A Faqih.....390

Synthesis of a Carbon-activated Microfiber from Spider Webs Silk
E Taer, W S Mustika and R Taslim.....401

Lead accumulation by jabon seedling (*Anthocephalus cadamba*) on tailing media with application of compost and arbuscular mycorrhizal fungi
L Setyaningsih, Y Setiadi, S W Budi, Hamim and D Sopandie.....407

Predictive Modeling of Rice Yellow Stem Borer Population Dynamics under Climate Change Scenarios in Indramayu
E Nurhayati, Y Koesmaryono and Impron.....418

Risk Modelling of Agricultural Products
E H Nugrahani.....428

Preliminary study : optimization of pH and salinity for biosurfactant production from *Pseudomonas aeruginosa* in diesel fuel and crude oil medium
A Z N Ikhwani, H S Nurlaila, F D K Ferdinand, R Fachria, A E Z Hasan, M Yani, I Setyawati and Suryani.....433
Atomic Orientation Detection using Nonlinear Optics and its Application as an Environmental Sensor

M R Tawakal, H Alatas and H Hardhienata.....440

Simple conversion of fatty nitriles to primary fatty amines through iron(II)-tmphen catalyzed hydrosilylation

A Subekti, T T Irawadi and N Darmawan.....446

Clustering Haze Trajectory of Peatland Fires in Riau Province using K-Means Algorithm

H Khairat, I Sukaesih Sitanggang and D E Nuryanto.....452

The Best Extraction Technique for Kaempferol and Quercetin Isolation from Guava Leaves (Psidium guajava)

I Batubara, I H Suparto and N S Wulandari.....458

Quality Evaluation of Potato Clones as Processed Material Cultivated in Lembang

S T Rahayu, T Handayani and P S Levianny.....465
Determinant factors for Brebes shallot farmers in selecting shallot varieties (Case study in Brebes, Central Java Indonesia)

A Sembiring.....471

Molecular Dynamics Approach in Designing Thermostable Aspergillus niger Xylanase

N D Malau and M Sianturi.....478

Synthesis and Characterization of Composite Hydroxyapatite-Silver Nanoparticles

Charlena, N A Nuzulia and Handika.....484

The Flexible Carbon Activated Electrodes made from Coconut Shell Waste for Supercapacitor Application

E Taer, W S Mustika, Agustino, Fajarini, N Hidayu and R Taslim.....493

Inhibition of α-Glucosidase, Total Phenolic Content and Flavonoid Content on Skin Fruit and Flesh Extracts of Some Varieties of Snake Fruits

E Rohaeti, M R Fauzi and I Batubara.....499

In Vivo Inhibition of Lipid Accumulation in Caenorhabditis elegans

Sulistiyani, E P Purwakusumah and D Andrianto.....505
012068
OPEN ACCESS
Isolation, Fractionation and Characterization of Catalase from *Neurospora crassa* (InaCC F226)

Suryani, L Ambarsari and E Lindawati.....512

012069
OPEN ACCESS
Protein Characterization of Javan Cobra (*Naja sputatrix*) Venom Following Sun Exposure and Photo-Oxidation Treatment

Sulistiyani, R S Biki and D Andrianto.....519

012070
OPEN ACCESS
The Phase Transformation and Crystal Structure Studies of Strontium Substituted Barium Monoferrite

A Mulyawan, W A Adi, S Mustofa and A Fisli.....527