

Conference Programme
Papers Abstracts

Global Innovation on Sustainability and Sustainable Development



SAFE 2017 - International Conference
Sustainable Agriculture, Food and Energy
August 22-24, 2017, MALAYSIA

CONTENTS



SAFE 2017 - International Conference
Sustainable Agriculture, Food and Energy
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5th International Conference Sustainable Agriculture, Food, and Energy SAFE2017

August 22-24, 2017
Acapella Suites Hotel Shah Alam, MALAYSIA

**“Global Innovation on Sustainability and
Sustainable Development of Agriculture,
Food and Energy”**

Organizing Institution



SAFE NETWORK
Asia Pacific Network for Sustainable Agriculture, Food and Energy

16.00-16.05	SAT-19	SDME-94	AE-10	IPD-22	SAT-42	
16.05-16.10	SAT-20	SDME-95	AE-12	IPD-23	SAT-43	
16.10-16.15	SAT-21	SDME-97	AE-13	IPD-25	SAT-44	
16.15-16.20	SAT-22	SDME-98	AE-14	IPD-26	SAT-45	
16.20-16.25	SAT-24	SDME-99	AE-15	IPD-28	SAT-46	
16.25-16.30	SAT-25	SDME-100	AE-16	IPD-29	SAT-48	
16.30-16.45	Coffee Break					
16.45-18.00						
Breakout Session 2						
Venue: Acapella Suites Hotel, MALAYSIA						
Person in charge: Assoc.Prof. SITI NORASMAH, UiTM-MALAYSIA						
	Room 1 SERAYA ROOM A	Room 2 SERAYA ROOM B	Room 3 SERAYA ROOM C	Room 4 MERANTI ROOM A	Room 5 MERANTI ROOM B	Room 6 ORCHID ROOM, First Floor
Parallel Session	Session Chair: Dr. AIDA AZMI, Universiti Teknologi MARA-MALAYSIA	Session Chair: Prof. Ardi. ANDALAS University- Indonesia	Session Chair: Gigi B. Calica, Ph.D . Philippine Center for Postharvest Development and Mechanization, Philippines	Session Chair: Kesuma Sayuti Faculty of Agricultural Technology, Andalas University, Indonesia	Session Chair: Assoc. Prof. Dr. Nazlinda Abdullah, UiTM Malaysia	NETWORKING DISCUSSION
16.45-16.55	Usman Pato, V. S. Johan dan R. D. Hasibuan Faculty of Agriculture- Riau University. INDONESIA ANTIBIOTIC AND ANTIBACTERIAL ACTIVITY OF LACTOBACILLUS CASEI SUBSP. CASEI R-68 AGAINST FOOD BORNE PATHOGENS	Prof. Dr. Md. Mizanur Rahman Bhuiyan. SAFE- Network National Coordinator (Bangladesh). Soil Science Discipline Khulna University- Khulna. Bangladesh PROSPECTS AND PROBLEMS OF WATERSHED BASED AGRO- FORESTRY IN THE HILLS OF BANGLADESH	EMDY Ekanayake ¹ , WAKG Thakshila ¹ , TSK Dharmasiri ¹ , MAGD Samanmali ¹ , SS Jayasinghe ² , EPS Chandana ¹ , C Jayasumana ³ , SH Siribaddana ⁴ , PMCS De Silva ¹ ¹ Dept. of Zoology, University of Ruhuna, Sri Lanka, EMERGING CHRONIC KIDNEY DISEASE OF UNKNOWN ETIOLOGY IN PADDY AND SUGARCANE FARMERS IN TWO ADJACENT PROVINCES, SRI LANKA.	Prof. Evawani Aritonang University of North Sumatra. INDONESIA. BIRTH LENGTH AND WEIGHT NOT ASSOCIATED WITH STUNTING AMONG CHILDREN UNDER FIVE IN NORTH SUMATERA PROVINCE	M. S. Faid ¹ , N.N.M.Shariff ² , Z. S. Hamidi ³ ¹ Academy of Contemporary Islamic Studies UiTM Shah Alam Selangor, Malaysia ² Academy of Contemporary Islamic Studies UiTM Shah Alam Selangor, Malaysia ³ Faculty of Applied Sciences UiTM Shah Alam Selangor, Malaysia MALAYONESIA CONCEPT OF SUSTAINABILITY ON THE ISSUE OF LIGHT POLLUTION	
16.55-17.00	FST-02	SDME-01	SDME-35	FST-15	IPD-30	

17.00-17.05	FST-04	SDME-02	SDME-36	FST-16	IPD-31
17.05-17.10	FST-05	SDME-03	SDME-38	FST-17	IPD-33
17.10-17.15	FST-06	SDME-04	SDME-39	FST-18	IPD-34
17.15-17.20	FST-07	SDME-05	SDME-40	FST-19	IPD-35
17.20-17.35	FST-08	SDME-06	SDME-41	FST-20	IPD-36
17.35-17.40	FST-09	SDME-07	SDME-43	FST-22	IPD-39
17.40-17.45	FST-10	SDME-08	SDME-44	FST-24	IPD-40
17.45-17.50	FST-11	SDME-10	SDME-46	FST-25	IPD-42
17.50-17.55	FST-12	SDME-11	SDME-47	FST-26	IPD-43
17.55-18.00	FST-13	SDME-12	SDME-50	FST-29	IPD-44
18.00-18.05	FST-14	SDME-13	SDME-51	FST-30	IPD-46
18.05-18.10	SAT-50	SDME-14	SDME-52	FST-32	IPD-47
18.10-18.15	SAT-51	SDME-15	SDME-53	FST-35	IPD-48
18.15-18.20	SAT-52	SDME-16	SDME-55	SDME-108	IPD-49
18.20-18.25	SAT-53	SDME-17	SDME-58	SDME-109	IPD-50
18.25-18.30	SAT-54	SDME-18	SDME-59	SDME-110	IPD-51
18.30-18.35	SAT-57	SDME-19	SDME-60	SDME-111	IPD-52
18.35-18.40	SAT-60	SDME-21	SDME-61	SDME-107	IPD-53
18.40-18.45	SAT-61	SDME-22	SDME-62	SDME-27	IPD-54
18.45-18.50	SAT-62	SDME-24	SDME-64	SDME-32	IPD-57
18.50-18.55	SAT-64	SDME-25	SDME-65	SDME-33	
18.55-17.00	SDME-68	SDME-26	SDME-66	SDME-67	

19.00 – 19.15 CLOSING CEREMONY
Venue: SERAYA Ball Room, Acapella Suites Hotel

Key points/highlight from the Conference

Assoc. Prof. Dr. Nurul Huda, *SAFE-Network Resident Coordinator (MALAYSIA), UniSZA Trengganu. MALAYSIA*

Dr. Irawati Chaniago, *Andalas University-INDONESIA [Secretary of SAFE-Network]*

Closing Message: Prof. Dr. Hj. Khudzir Bin Hj Ismail, *Dean of Faculty of Applied Science. UiTM, [Chairman SAFE2017 Conference]*

20.00 – 22.00 Farewell Dinner at TUPAI-TUPAI RESTAURANT, SHAH ALAM

DAY 3: THURSDAY, August 24, 2017 | DEPARTURE OF PARTICIPANTS

SDME-62

Indra Laksmiana¹, Rosda Syelly², Nurzarah Tazar¹

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IDENTIFICATION OF SYSTEM MODEL FOR CLASSIFYING SUPERIOR VARIETY OF CASSAVA (Manihot Utilissima Crantz)

SDME-63

Corryanti¹, Triswahyudi²

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STUDY ON TEAK (Tectona grandis Linn F.) CLONES PRODUCTION IN CLONAL SEED ORCHARD

SDME-64

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Domestic Factors That Affect The Price Of Styrene Butadiene Latex (SBL) in Indonesia

SDME-65

Ujang Paman Ismail, Hajry Arief Wahyudy and Khairizal

Department of Agribusiness, Faculty of Agriculture, Riau Islamic University. Jl. Kohanuddin Nasution No. 113 P. Marpayan, Pekanbaru Riau 28284, Indonesia.

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The role of machinery hire services in increasing farm machines utilization for small rice farming in Kampar Regency, Indonesia.

SDME-66

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Effect of Nutmeg (Myristica fragrans Houtt) leaves and clove (Syzygium aromaticum L) leaves treatment to Physical and Chemical Characteristics of Kacang Goat (Copra hircus)

SDME-67

Sutriyono[#], Johan Setianto[#], Hardi Prakoso[#], Basyarudin Zain[#]

[#] Department of Animal Science, University of Bengkulu, Jl. W.R. Subratman Kandane Limun, Bengkulu 38371, Indonesia.

E-mail: sutri_yono_ok@yahoo.co.id

Domestication : Feeding management of red jungle fowl offsprings in Seluma District, Bengkulu, Indonesia

SDME-68

Aprisal^{#1}, Herviyanti^{#2} dan Hidayat^{#3}

¹ and ² Lecturer of Soil Science Departement of Agriculture Faculty, University of Andalas. Email: aprisalunand@gmail.com

³ Soil Science Student, ANDALAS University. INDONESIA

The Effect of Reclamation to Fluxtuation of Soil Moisture Content on Dry Land in the Rooting Zone Arian Singkarak Planted with Annuals

SDME-69

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ANALYSIS OF SUPPLY CHAIN PERFORMANCE MANAGEMENT AND AGRIBUSINESS OF MANGOSTEEN IN PADANG PARIAMAN

SDME-70

Benny Satria Achmad¹, Jonni²

Agricultural State Polytechnic of Payakumbuh³

Jl Raya Negara Km 7. Tanjung Pati, Telp (0742)7754192-Fax (0752)7750220. Email: jo_jonni@yahoo.com

POTENTIAL FOR THE PRESERVATION OF AGRICULTURAL LANDSCAPE IN NAGARI PANDAI SIKEK AGROTURISM, WEST SUMATRA

SDME-71

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Trips (Thysanoptera: Thripidae) in flower and fruit of mangosteen (Garcinia mangostana L.) and the correlation to fruit scars

SDME-72

Yunilas, Nurzainah Ginting and Hasnudi

Faculty of Agriculture, University of North Sumatera, Medan, Indonesia. E-mail: yunilas11@yahoo.co.id

Exploration of Cellulolytic Bacteria of Plick-U from Aceh As Inoculum Fermented to Fiber Feed

SDME-61

EVALUATION OF THE USE OF HAND TRACTORS IN
LIMAPULUH KOTA REGENCY

Yudistira and Zulnadi

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Abstract— In Limapuluh Kota regency the agricultural machinery, especially hand tractors there are some type and model. This could happen because we do not know which type of hand tractors are really suitable in use for agricultural land. Seeking the answer is very important to carry out research on mechanization selective approach to equivalence of technology. So we can find out the needs of the hand tractor in term of kinds and numbers that suitable for this area. It is very helpful for local government in determining the policy of adoption of technology for agricultural machinery in the future. This study aims to get the required number of hand tractors based on agricultural area broad and planting index. The research also aimed to determine whether these tractors are appropriate in terms of humanware, teknoware, infoware and organoware. This equivalence is required in order to determine the hand tractors operate optimally and economically. Method of data collection is done in two stages, the first stage is surveys to obtain data on land size, number and types of hand tractors and the rental system land cultivation. The second stage of the data obtained by conducting direct testing in the field to get the data capacity of hand tractors operation. Based on the survey results in the regency Limapuluh Kota there is 22 203 hectares of rice land area consisting of 15 580 hectares of irrigated land area and 6623 hectares of non irrigated land area. With in rice cropping index 2 times a year, the area of land that can be processed by using a hand tractor is 44 406 hectares. The research also shows that the capacity of the hand tractor for land cultivation with 3 times work shows that the hand tractor type "Kama" is the greatest capacity, namely 0.065 ha / hour followed by type of "Hydro Tiller", "Quick" and "Yanmar" namely; 0.061 ha/hour, 0.060 ha/hour and 0.059 ha/hour. By calculating the rice land broad area and the working capacity of the smallest hand tractors for 3 times cultivation, that is 0.059 hectare/hour (quick type) refer that the required amount of hand tractors in the district of Limapuluh Kota is 596 units. The number of hand tractors available today already exceeds the requirements should be, namely 1,874 units of various types.

Keywords— Hand tractor, Agricultural Mechanization, equivalence of technology Limapuluh Kota Regency

SDME-62

IDENTIFICATION SYSTEM MODEL FOR CLASSIFYING SUPERIOR
VARIETY OF CASSAVA (*Manihot Utilissima Crantz*)Indra Laksana¹, Rosda Syelly², Nurzarrah Tazar³

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Abstract— Cassava (*Manihot Utilissima Crantz*) is very potential for being processed as a vegetable, animal feed, chips, or bioethanol through fermentation process etc. The need for superior cassava varieties as raw materials is expected will produce a high-quality product. This research designs an identification system for three varieties of cassava based on levels of cyanide acid by applying a heuristic search algorithm using genetic operations. The similarity of cassava varieties to each other very close. In order to identify them, this research proposes genetic programming that is structured and represented in tree form. The experiments in this study used binary code data resulting from the booleanizing process of three varieties of cassava. Binary code data is divided into training data and test data using k-fold cross validation with the proportion of 80% and 20%. This study produces a rule to identify. The obtained rule consists of 500,000 population parameters, 20-25 nodes consisting of Function set AND, OR, NOR and 52 terminal sets, crossover probability of 0.9 and 0.1 mutations of 5 generations. The resulting rule can be utilized by the community in identifying cassava varieties

Keywords— cassava variety, Genetic programming, cyanide acid.

Date : 6th JULY, 2017
Ref. No. : 311/SAFE-Network/SAFE2017/2017
Registration No : 2017-229

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Dear colleague,

Acceptance to present a paper for the conference

Thank you for submitting an abstract entitled:

IDENTIFICATION OF SYSTEM MODEL FOR CLASSIFYING SUPERIOR VARIETY OF CASSAVA (*Manihot Utilissima Crantz*)

For the International Conference-Sustainable Agriculture, Food and Energy (SAFE2017), Shah Alam-Malaysia, Agust 22-24, 2017.

We are pleased to inform you that the committee has decided that your paper has been accepted for **oral presentation** in this conference. If you want to publish your paper, you must submit the original and unpublished full paper through the 4rd International Conference Sustainable Agriculture, Food, and Energy (SAFE2016) using [EasyChair for SAFE2017 Submission System](http://safe2017.safetainability.org) at <http://safe2017.safetainability.org> or by e-mail to: safe2017malaysia@gmail.com. **The full paper is optional.** Please use single space format using [Template_SAFE_2017](#). The deadline for full paper submission is July 15, 2017.

Thank you very much and looking forward to seeing you in Shah Alam, Malaysia!

Regards,



Dr. Paul Kristiansen
Head of Advisory Board



Dr. Novizar Nazir
SAFE-Network Coordinator



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CERTIFICATE

Asia Pacific Network for Sustainable Agriculture, Food and Energy (SAFE-Network)
and Universiti Teknologi MARA, MALAYSIA
Jointly certify that,

INDRA LAKSMANA

PRESENTER

International Conference-Sustainable Agriculture, Food and Energy (SAFE 2017)

Shah Alam Selangor, MALAYSIA. August 22-24, 2017

Global Innovation on Sustainability and Sustainable Development

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