6220150007

SAFE 2015

1955 - 2015
XÂY DỰNG-PHÁT TRIỂN

CERTIFICATE

Asia Pacific Network for Sustainable Agriculture, Food and Energy (SAFE-Network), Andalas University and Nong Lam University-Ho Chi Minh City jointly certify that

TERTIA DELIA NOVA

as PRESENTER

in International Conference-Sustainable Agriculture, Food and Energy (SAFE2015). Nong Lam University and Rex Hotel-Ho Chi Minh City, November 17-18, 2015-VIETNAM

Fostering Multi-stakeholder Collaboration on Sustainable, Agriculture, Food, and Energy

Prof. Dr. Nguyen Hay
SAFE2015 Chairman
President of Nong Lam University

Asia Pacific Network for Sustainable Agriculture, Food and Energy
SAFE Network
http://safetainability.org

Dr. Novizar Nazir
SAFE Network Coordinator

World Agroforestry Centre
TRANSFORMING LIVES AND LANDSCAPES

DIBANCO

Insight

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

safetainability.org

KEMENTERIAN RISET, TEKNOLOGI DAN PENDIDIKAN TINGGI
UNIVERSITAS ANDALAS
FAKULTAS PETERNAKAN
Kampus Limau Manis Padang 25163
Telepon (0751) 71464-74755-74208-72400 Fax. (0751) 71464
http://faterna.unand.ac.id e-mail : faterna@unand.ac.id

SURAT TUGAS

No. 1887 /UN16.6/KP/2015

Dekan Fakultas Peternakan Universitas Andalas dengan ini menugaskan kepada nama-nama yang tersebut dibawah ini :

Nama	: **Dr. Ir. Tertia Delia Nova, MS**
NIP	: 196011161986032002
Pangkat/Gol	: Pembina / IV.a
Jabatan	: Lektor Kepala
Unit Kerja	: Fakultas Peternakan Universitas Andalas

Untuk menghadiri dan mengikuti 3rd International Conference Sustainable Agriculture, Food and Energy (SAFE2015) dengan judul makalah "*251/The perception of Layer Chicken Farmers Toward Biosecurity Standards in Anticipating Avian Influence in Padang, West Sumatera*" pada tanggal 17 s/d 19 November 2015 di Nong Lam Univerity Ho Chi Minh, Vietnam. Setelah melaksanakan tugas diharapkan dapat melaporkan hasilnya secara tertulis ke Dekan Fakultas Peternakan Unand. Segala biaya yang timbul akibat dikeluarkannya Surat Tugas ini dibebankan kepada DIPA Universitas Andalas Tahun 2015.

Demikianlah Surat Tugas ini diberikan, untuk dilaksanakan sebagaimana mestinya.

Padang, 13 Agustus 2015

Dekan,

Dr. Ir. H. Jafrinur, MSP
NIP. 196002151986031005

3rd International Conference
Sustainable Agriculture, Food and Energy

1955 - 2015
XÂY DỰNG-PHÁT TRIỂN

Conference Programme
Papers Abstracts

Fostering Multi-Stakeholder Collaboration

on Sustainable Agriculture, Food and Energy

GOVERMENT
ENGINEER
RESEARCHERS
FARMER
INSTITUTIONS
COMMUNITY
STUDENT
SAFE NETWORK

Organized by :

NONG LAM UNIVERSITY
Ho Chi Minh City

World Agroforestry Centre
TRANSFORMING LIVES AND LANDSCAPES

ANDALAS UNIVERSITY
INDONESIA

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

3rd International Conference of Sustainable Agriculture, Food, and Energy
SAFE2015

November 17-19, 2015
Nong Lam University Ho Chi Minh City-VIETNAM
REX HOTEL Ho Chi Minh City-VIETNAM

"Fostering Multi-stakeholder Collaboration on Sustainable Agriculture, Food and Energy"

Organized by:

NONG LAM UNIVERSITY HO CHI MINH CITY-VIETNAM

ANDALAS UNIVERSITY- INDONESIA

World Agroforestry Centre
TRANSFORMING LIVES AND LANDSCAPES
ICRAF-VIETNAM

CONTENTS

SAFE 2015 COMMITTEE

Patron
Prof. Dr. Nguyen Hay – *President of Nong Lam University Ho Chi Minh City, VIETNAM*
Prof. Dr. Werry Darta Taifur– *Rector of Andalas University, INDONESIA*

Executive Chairman
Dr. Novizar Nazir-*Andalas University-INDONESIA*

Chairman of Organizing Comittee
Prof. Dr. Nguyen Hay – *President* of *Nong Lam University Ho Chi Minh city, VIETNAM*

Local Conference Coordinator
Dr. Nguyen Ngoc Thuy, *Nong Lam University Ho Chi Minh city, VIETNAM*

Advisory Committee
Prof. Dr. Helmi Syarifuddin, Andalas University-Indonesia
Dr.Ir. Ophirtus Sumule, DEA. *Director for Innovation System. Directorate General of Strengthening for Innovation. Government of Republic of Indonesia*
Prof. Dr. Santosa. Andalas University
Prof. dr. Dewa Putu Widjana, DAP&E. Sp.Par.K-*Warmadewa University-INDONESIA*
Dr. Drs. Anak Agung Gde Oka Wisnumurti, M.Si-Warmadewa University-INDONESIA
Prof.Dr. I Nyoman Kardana, *MHum, Warmadewa University-INDONESIA*
Prof.Dr. Bohari M Yamin, *Universiti Kebangsaan Malaysia, MALAYSIA*
Dr. Nobutaka Ito, *Chiang Mai University, THAILAND*
Prof. Dr. Sermkiat Jomjunyong, Chiang Mai University, THAILAND
Prof. Dr. Kyeong Uk Kim, *Seoul National University, KOREA*
Prof. Dr. Jyh-Chen Chen, *National Central University, TAIWAN*
Prof. Dr. Michihiko Ike, *Osaka University, JAPAN*
Prof. Dr. James E. Hill, *University of California, Davis, USA*
Prof. Bhesh Bhandari,*The University of Queensland, AUSTRALIA*
Dr.Tanongkiat Kiatsiriroat,*Chiang Mai University, THAILAND*
Prof.Dr. Masateru Senge, *United Graduate School of Agricultural Science, Gifu University, JAPAN*
Prof. Dr Wan Mohtar Wan Yusoff-*Universiti Kebangsaan Malaysia, MALAYSIA*
Prof . Dr Aminuddin Mohamad, *Universiti Teknologi MARA- Pahang, MALAYSIA*
Prof. Dr. Tsutomu Morinaga-*Prefectural University of Hiroshima, JAPAN*
Prof. Dr. Y. Niimi-*Prefectural University of Hiroshima, JAPAN*

Steering Committee
Assoc. Prof. Dr. Nguyen Huy Bich-*Nong Lam University Ho Chi Minh City, VIETNAM*
Dr. Delia C. Catacutan PhD, Country Representative-World Agroforestry Centre (ICRAF), Hanoi, Vietnam.
Prof. Dr. Fauzan Azima – *Andalas University-INDONESIA*
Assoc. Prof. Dr. Nurul Huda. *Universiti Sains Malaysia. MALAYSIA*
Prof. P.M.C.S de Silva, PhD, University of Ruhuna, SRI LANKA
Prof. Dr. Amitava Basu, *Bidhan Chandra Krishi Vidyalaya, INDIA*
Dr. Pattarawadee Sumthong Nakmee, Kasetsart University, Si Racha Campus-THAILAND
Prof. Kohei Nakano, Ph.D -*Gifu University, JAPAN*
Dr. Paul Kristiansen-*University of New England, AUSTRALIA*
Dr. Yuli Witono, *Jember University-INDONESIA*
Prof. Dwinardi Aprianto, *Bengkulu University-INDONESIA*
Dr. Ir. I G Bagus Udayana – *Warmadewa University-INDONESIA*

Prof. Nasser Aliasgharzad, University of Tabriz-IRAN
Dr. Yuli Wibowo, Jember University, INDONESIA
Prof.Dr. Yuli Hariyati, Jember University, INDONESIA
Dr. Fahmi Riyadi, Government of Indonesia, INDONESIA

SAFE2015 Secretariat:

Mr. Nguyen Tran Phuoc, *Nong Lam University Ho Chi Minh city,* VIETNAM
Nguyen Le Tuong, MSc, *Nong Lam University Ho Chi Minh city,* VIETNAM
Ms.Pham Thi Nguyet Khanh, *Nong Lam University Ho Chi Minh city,* VIETNAM
Ms. Nguyen Thi Hoai, *Nong Lam University Ho Chi Minh city,* VIETNAM
Khandra Fahmy, PhD, *Andalas University, INDONESIA*
Renny Eka Putry, PhD, Andalas University, INDONESIA
Rahmat Hidayat, ST, M.Sc.IT- *State Polytechnic of Padang –INDONESIA*
Aisman Rasinin, MSc-*Andalas University-INDONESIA*
Lisa Hiwasaki/PhD-*ICRAF Vietnam*
Rachmat Mulia/PhD- *ICRAF Vietnam*
Le Van Hai- *ICRAF Vietnam*
Nguyen Anh Thu- *ICRAF Vietnam*

Scientific Comittee

Dr. Paul Kristiansen-*University of New England-AUSTRALIA*
Prof.Dr. Shu-San Hsiau, *National Central University, TAIWAN*
Prof. Dr. Jiing-Yih Lai,*National Central University, TAIWAN*
Prof. Dr. Dung-An Wang, *National Chung Hsing University, TAIWAN*
Prof. Dr.Daecheol Kim, *Chonbuk National University, KOREA*
Prof.Dr. Nat Vorayos, *Chiangmai University, THAILAND*
Prof. Dr. Hiroshi Umakoshi, *Osaka University, JAPAN*
Prof. Glenn M. Young, *University of California, Davis, USA*
Assoc.Prof. Cary J. Trexler, *University of California, Davis, USA*
Assoc.Prof. Minh Nguyen, *University of Newcastle, AUSTRALIA*
Dr. Daniel Pioch, *Physico-chemistry of Processes and Bioenergy Laboratory, Montpellier, FRANCE*
Prof. Dr. ir. Koen Dewettinck, Ghent *University, BELGIUM*
Ass.Prof. Dr.Charin Techapun, *Chiang Mai University, THAILAND*
Ass.Prof. Dr. Taewee Tongdaeng Karrilla, *Prince of Songkla University, Pattani Campus, THAILAND*
Asst. Prof. Dr. Worasit Tochampa, *Naresuan University, THAILAND*
Dr. Bui Ngoc Hung, *Nong Lam University Ho Chi Minh city, VIETNAM*
Assoc. Prof. Dr. Phan Tai Huan, *Nong Lam University Ho Chi Minh city, VIETNAM*
Assoc.Prof. Dr. Le Quoc Tuan, *Nong Lam University Ho Chi Minh city, VIETNAM*
Dr. Nguyen Ngoc Thuy, *Nong Lam University Ho Chi Minh city, VIETNAM*
Dr. Sirichai Kanlayanarat. *King Mongkut's University of Technology Thonburi, THAILAND*
Prof. T R Preston, PhD, *DSc CIPAV, COLOMBIA*
Asst. Prof. Dr. Chanin Umpostira, *Naresuan University-THAILAND*
Prof Steve Déry, *Université Laval Québec, Quebec, CANADA*

SAFE-Network Secretariat

[1] Ir. Aisman, MS-*Andalas University* (Coordinator); [2] Rahmat Hidayat, Politechnic State of Padang- INDONESIA; [3]Tsara Amalia-*Andalas University* ; [4] Hanifah Addinny-*Andalas University*; [5] Reza Kusuma-*Andalas University* ; [5] Nurselvi-*Gajah Mada University* [6] Annisyia Zarina Putri-*Gifu University-JAPAN*

Contact Person:

Ms.Pham Thi Nguyet Khanh, SAFE 2015 Secretary
Nong Lam University Ho Chi Minh city, VIETNAM
Linh Trung Ward, Thu Duc Dist., Ho Chi Minh City, Viet Nam
Phone: (+84-8) 38966946
Email: ptnkhanh@hcmuaf.edu.vn

Mr. Nguyen Tran Phuoc, SAFE 2015 Secretary
Nong Lam University Ho Chi Minh city, VIETNAM
Linh Trung Ward, Thu Duc Dist., Ho Chi Minh City, Viet Nam
Phone: (+84-8) 38966946. Email: tranphuoc@hcmuaf.edu.vn

Ms. Nguyen Thi Hoai, SAFE 2015 Secretary
Nong Lam University Ho Chi Minh city, VIETNAM
Linh Trung Ward, Thu Duc Dist., Ho Chi Minh City, Viet Nam
Phone: (+84-8) 38966946. Email: nt.hoai@hcmuaf.edu.vn

Dr. Agr. Wahyudi David, MSc, *SAFE-Network Operation and Communication*
Food Science and Technology Univ. Bakrie. Jl. HR. Rasuna Said Kav C22 Kawasan Epicentrum. Kuningan Jakarta Selatan 12920
Phone : +62 21 1448 ext 374. Fax : +62 21 526 3191
E-mail: wahyudi.david@bakrie.ac.id

SAFE2015 PROGRAM

DAY 0: Monday, November 16, 2015
ARRIVAL OF PARTICIPANTS

DAY 1: Tuesday, November 17, 2015
Parallel Session, Networking Discussion and Pre-Conference Tour
Venue: Class Room, Nong Lam University Ho Chi Minh City

7.30-8.30	**Ben Thanh Market-NLU Campus** (*Bus will be provided by Organizing Committee*)
8.30-9.00	**REGISTRATION** Coordinator: **Prof. Dr. Fauzan Azima, *Andalas University-INDONESIA*** *Member: SAFE-Network Secretariat Staff: [Aisman Rasjinin, Rahmat Hidayat, Nurselvi Syafril, Reza Kusuma, Putri Yuliastuti, Tatiek Kancaniati]* *Local OC Staff-VIETNAM*
9.00- 12.10 PM	**Parallel Session**

9.00-10.50 Parallel Session 1
Venue: Nong Lam University Ho Chi Minh City

Parallel Session	Room 1	Room 2 **Session Chair:** ***Dr. Khandra Fahmy-*** *Andalas University. INDONESIA*	Room 3 **Session Chair:** ***Vonny Indah Mutiara-*** *Gifu University. JAPAN*	Room 4 **Session Chair:** ***Dr. Renny Eka Putri-*** *Andalas University. INDONESIA*	Room 5 ***Session Chair:*** **Dr. Ing. Thien Trung Le.** *Faculty of Food Science and Technology. Nong Lam University - Ho Chi Minh City. Thu Duc District, Ho Chi Minh City, Vietnam*	Room 6 ***Session Chair:*** ***Dr. Rahmat Mulia-*** *ICRAF Vietnam*
09.00-09.10 AM		**Prof. Kesuma Sayuti**[*], Fauzan Azima[*], Melvin Marisa[*] [*] *Department of Agricultural Processing Technology, Andalas University, Kampuss Limau Manis, Padang, Indonesia*	**Prof. Hasanuddin**[1], [1]*Researcher Department of Agrotechnology, Faculty of Agriculture, University of Syiah Kuala Banda Aceh-Indonesia*	**Y. A. Yusof**[*1], *S. W. Tan, N. L. Chin*[#1] [1]*Department of Process and Food Engineering, Universiti Putra Malaysia (UPM),43400 Serdang, Selangor, Malaysia*	**Hong M.X. Nguyen**[(1)], *Dong T. Phan*[(1)], *Andreas L. Lopata*[(2)], *Peter Smooker*[(3)] [(1)] *Faculty of Food Science and Technology, Nong Lam University, Thu Duc District, Ho Chi minh City, Vietnam,*	**Norman G. De Jesus** *Project leader, Pampanga Agricultural College-ALIAS R&DE CENTER Philippines*

09.10-09.15 AM		Q&A	Q&A	Q&A	Q&A	Q&A
09.15-09.20 AM		FT-02	SA-02	PD-02	FT-15	PMM-02
09.20 -09.25 AM		FT-03	SA-03	PD-03	FT-16	PMM-03
09.25 -09.30 AM		FT-04	SA-04	PD-04	FT-17	PMM-04
09.30 -09.35 AM	NETWORKING DISCUSSION	FT-05	SA-05	PD-05	FT-18	PMM-05
09.35-09.40 AM		FT-06	SA-06	PD-06	FT-19	PMM-06
09.40-09.45 AM		FT-07	SA-07	PD-07	FT-20	PMM-07
09.45-09.50 AM		FT-08	SA-08	PD-09	FT-21	PMM-08
09.50–09.55 AM		FT-09	SA-09	PD-10	FT-22	PMM-09
09.55-10.00 AM		FT-10	SA-10	PD-11	FT-23	PMM-10
10.00-10.05 AM		FT-11	SA-11	PD-12	FT-24	PMM-11
10.05-10.10 AM		FT-12	SA-12	PD-13	FT-25	PMM-12
10.10-10.15 AM		FT-13	SA-65	PD-53	FT-26	PMM-13
10.15-10.30 AM		Q&A	Q&A	Q&A	Q&A	Q&A
10.30-10.50 AM		Coffee Break				

Parallel Session II

Venue: Nong Lam University Ho Chi Minh City

Room 2	Room 3	Room 4	Room 5	Room 6
Session Chair: **Asst. Prof. Worasit Tochampa, Ph.D.** *Chair, Department of Agro-industry* *Faculty of Agriculture, Natural Resources and Environment* *Naresuan University, Muang, Phitsanulok 65000 THAILAND*	**Session Chair** **Assoc. Prof. Nguyen Van Ngai, Dean,** *Fac. Of Agriculture and Economics, Nong Lam University HCMC*	**Session Chair:** **Dr. Ho Thanh Ba** *Nong Lam University, HCMC, Vietnam*	**Session Chair:** ***Yuthana Phimolsiripol, Ph.D.*** ***Director, Food Innovation and Packaging Center*** ***Division of Product Development Technology, Faculty of Agro-Industry, Chiang Mai University 50100***	**Session Chair:** **Prof. Dr. Manh Hoang.** **Institute for** *Sustainability and Innovation- Victoria University, Australia*
Van Anh Le[1], Minh H. Nguyen[1,2], Sophie E. Parks[1,3] and Paul D. Roach[1] *[1] School of Environmental*	**Adel Reyhanitabar,** *University of Tabriz-Islamic Republic of IRAN*	**Henny Purwaningsih*,** Mohammad Khotib, Zainal Alim Mas'ud, & Tun Tedja Irawadi *Department of Chemistry,*	Manami Watanabe[1]; Natsuki Uchida[2]; Keiko Fujita[2]; Tomoyuki Yoshino[2]; **Toshifumi Sakaguchi[3]**	*University* ***Dr.Doc Lap Tran.*** *Department of Agricultural Economics,*

		and Life Sciences, University of Newcastle, Ourimbah, NSW 2258, Australia. *[2]School of Science and Health, University of Western Sydney, Penrith, NSW 2751, Australia.*		*Faculty of Mathematics and Science, Bogor Agricultural University, Bogor, Indonesia. Integrated Laboratory, Bogor Agricultural University, Bogor, Indonesia*	*[1]Department of Environmental Sciences, Prefectural University of Hiroshima-JAPAN* *[2]Department of Life Sciences, Prefectural University of Hiroshima-JAPAN* *[3]Department of Life Sciences and Department of Environmental Sciences,* Prefectural University of *Hiroshima-JAPAN*	*Faculty of Economics, Nong Lam University, Ho Chi Minh City, Vietnam E-mail: tdlap@hcmuaf.edu.vn*
11.00-11.05 AM		FT-28	SA-15	PD-15	FT-39	AE-27
11.05-11.10 AM		FT-29	SA-17	PD-16	FT-40	AE-28
11.10-11.15 AM		FT-30	SA-18	PD-17	FT-41	AE-29
11.15-11.20 AM		FT-31	SA-19	PD-18	FT-42	AE-30
11.20-11.25 AM		FT-32	SA-20	PD-19	FT-43	AE-31
11.25-11.30 AM		FT-33	SA-21	PD-20	FT-44	AE-33
11.30-11.35 AM		FT-34	SA-23	PD-21	FT-45	AE-33
11.35-11.40 AM		FT-36	SA-24	PD-22	FT-46	AE-34
11.40-11.45 AM		FT-37	SA-66	PD-23	FT-47	AE-35
11.45-11.50 AM		FT-52	SA-48	PD-24	FT-48	AE-39
10.50-10.55 AM		**FT-73**	**SA-68**	PD-48		AE-41
11.50-12.10		**Q&A**	Q&A	Q&A	**Q&A**	**Q&A**
12.10-13.30	**LUNCH BREAK & PRAYER**					
13.30-19.00	**Ho Chi Minh City TOUR**					

SUB-THEME

(1) Sustainable Agriculture (SA)
(2) Agriculture and Environment (AE)
(3) Agriculture and Energy (E)
(4) Food Technology (FT)
(5) Product Development (PD)
(6) Policy development, Management and Marketing (PMM)

DAY 2: Wednesday, 18 November 2015
VENUE: Rex Hotel HCMC

Time	Activity
7.30-8.30 AM	**Registration**
8.30-9.00AM	**Opening Ceremony** **Venue: Rex Hotel-Ho Chi Minh City**
8.30-8.35	Conference Program Introduction by Local Conference Coordinator, **Dr. Nguyen Ngoc Thuy**
8.35-8.40	Welcome Remark from President of NLU, **Prof.Dr. Nguyen Hay**
8.40-8.45	Welcome Remark from Rector of Andalas University, **Prof. Dr. Werry Darta Taifur, MA**
8.45-8.50	Welcome Remark by ICRAF Country Representative (Vietnam)-**Dr. Delia C. Catacutan.**
8.50-8.55	Presentation of Certificate of Appreciation and Special Gift from **Dr. Novizar Nazir (SAFE-Network)** to NLU, Andalas University, ICRAF, CPI-Indonesia and other sponsors
8.55-9.00	Delivery of **SAFE 2016 official logo** to the Delegate from Sri Lanka represented by **Prof. P.M.C.S De Silva, PhD** by NLU President, **Prof. Dr. Nguyen Hay and Photo Session**
9.00-10.15	**KEY NOTE ADDRESSES** **Venue: Ball Room, Rex Hotel Ho Chi Minh City**
	Fostering Multi-stakeholder collaboration for Sustainable Agriculture, Food and Energy **Session Chair: Dr. Paul Kristiansen,** *University of New England.* AUSTRALIA
9.10-9.25 AM	**Prof. Dr. Bui Chi Buu,** *former Director General, Southern Institute of Agricultural Science, Vietnam.* **Agricultural Transformation for Sustainable Development in Vietnam"**
9.25-9.40 AM	**Prof. Dr. Helmi Syarifuddin,** *SAFE-Network Andalas University* ***Fostering Multi-stakeholder collaboration for Sustainable Agriculture, Food and Energy: SAFE-Network Perspective***
9.40-9.55 AM	**Delia Catacutan, PhD.** *ICRAF Country Representative-Vietnam* ***Role of Agroforestry in Achieving Sustainable Agriculture, Food and Energy***
9.55-10.15	**Q & A** Presentation of Certificate of Appreciation and Special Gift to Session Chair and Keynote Speakers
10.15-10.30	**COFFEE BREAK**

10.30-11.40	**Plenary Session I** **Venue: Ball Room, Rex Hotel Ho Chi Minh City**
10.30-10.40AM	**Presenter 1**: **Dr. Agustin Mercado-**ICRAF Philippines ***The Landcare experience in the Philippines: Technical and institutional innovations for conservation farming***
10.40-10.50 AM	**Presenter 2**: **Prof. Dr. Mohd. Razak- Universiti Malaysia Kelantan-MALAYSIA** *Sustainable Non-Wood Forest Product Development, Universiti Malaysia Kelantan. MALAYSIA*
10.50-11.00 AM	**Presenter 3**. **Prof. Mizanur Rahman Bhuiyan-** Khulna University.Bangladesh *Agroforestry and Soil Conservation in the hilly areas of Bangladesh*
11.00-11.10 AM	**Presenter 4:** **Prof. Gemma Masahiko, *Waseda University-JAPAN*** Food Security for Asia and Pacific
11.10-11.40	Q & A Presentation of Certificate of Appreciation and Special Gift to session chair and invited Speakers
11.40-12.45	**Plenary Session II** **Venue: Rex Hotel-Ho Chi Minh City**
	Putting sustainability of agriculture, food and energy into practice (PS) **Venue: Ball Room, Rex Hotel Ho Vhi Minh City** **Session Chair: Assoc. Prof. Dr.-Ing. Huan Phan Tai** *Dean, Faculty of Food Science & Technology. NONG LAM UNIVERSITY* *Thu Duc District, Ho Chi Minh City, Vietnam*
11.40-11.50 AM	Presenter 5: **Prof Glenn Young, UC Davis-USA** **Building Safe Vegetable Value Chains in Southeast Asia**
11.50-12.00 AM	Presenter 6: **Prof. Kohei NAKANO, Ph.D,** *The United Graduate School of Agricultural Science, Gifu University-JAPAN* **"Challenges in Effective Utilization of CO_2 in Postharvest Technology for Sustainable Agriculture, Food and Energy"**
12.00-12.10 AM	**Presenter 7** **Nobutaka Ito,** *Faculty of Engineering, Chiang Mai University-THAILAND* **How Much Fee We Can Pay For Sustainable Society Building?**
12.10-12.20 AM	**Presenter 8** **Prof. Kyeong Uk Kim,** *National Seoul University Korea* **The Agricultural Mechanization status in South Korea**
12.20-12.45	Q & A Presentation of Certificate of Appreciation and Special Gift to session chair and invited Speakers
12.45-14.00	Lunch Break, Poster Session & Prayer
14.00-15.35	**Parallel Session 1** **Venue: Rex Hotel-Ho Chi Minh City**

Paralllel Session	**Room 1** **Session Chair:** **Dr. Lisa Hiwasaki,** ***ICRAF Vietnam***	**Room 2** **Session Chair:** **Assoc. Prof. Dr.** **Nguyen Huy Bich,** *Nong Lam University* *Ho Chi Minh City,* *VIETNAM*	**Room 3** **Session Chair:** *Dr. Rahmat Mulia-ICRAF Vietnam*	**Room 4** **Session Chair:** **Prof. P.M.C.S De Silva,** *University of Ruhuna-Sri Lanka*	**Room 5** **Session Chair:** ***Prof. Minh Nguyen****, The University of Newcastle-AUSTRALIA*
14.10-15.35	**Prof. Nurpilihan Bafdal-***Pajajaran University-INDONESIA*	**Jaya Wahono,** *Clean Power Indonesia-INDONESIA*	**Prof. LOURDES D. SABILE** *Planning and Research Development The University of Manila. 546 M.V. delos Santos, St., Sampaloc, Manila, Philippines*	**Prof. Takashi Oku** *Department of Life Sciences, Prefectural University of Hiroshima, Shobara, 727-0023, Japan. E-mail: toku@pu-hiroshima.ac.jp*	**Prof. Bhesh Bhandari** University of Queensland-AUSTRALIA
14.10-14.15	**AE-02**	**E-01**	**Q&A**	**SA-26**	**Q&A**
14.15-14.20	**AE-03**	**E-02**	**PMM-15**	**SA-27**	**FT-35**
14.20-14.25	**AE-04**	**E-03**	**PMM-16**	**SA-28**	**FT-56**
14.25-14.30	**AE-05**	**E-04**	**PMM-17**	**SA-29**	**FT-60**
14.30-14.35	**AE-06**	**E-06**	**PMM-18**	**SA-30**	**FT-64**
14.35-14.40	**AE-07**	**E-08**	**PMM-19**	**SA-31**	**FT-66**
14,40-14.45	**AE-08**	**E-09**	**PMM-20**	**SA-32**	**FT-68**
14.45-14.50	**AE-09**	**E-10**	**PMM-21**	**SA-33**	**FT-69**
14.50-14.55	**AE-10**	**E-11**	**PMM-22**	**SA-34**	**FT-70**
14.55-15.00	**AE-11**	**E-12**	**PMM-23**	**SA-35**	**FT-71**
15.00-15.05	**AE-12**	**E-13**	**PMM-23**	**SA-36**	**FT-72**
15.05-15.10	**AE-13**	**E-15**	**PMM-24**	**SA-37**	**FT-74**
15.10-15.15	**AE-14**	**E-21**	**PMM-25**	**SA-38**	**FT-75**
15.15-15.20	**AE-42**	**E-22**	**PMM-26**	**SA-67**	**FT-76**
15.20-15.35	**Q & A**	**Q&A**	**Q&A**	**Q&A**	**Q&A**
15.35-15.50	**Coffee Break**				

4.00-5.20 PM Parallel Session 2

Venue: Ball Room, Rex Hotel Ho Chi Minh City

	Room 1 **Session Chair:** **Narumol Matan,** *Wailalak Univerity-THAILAND*	**Room 2** **Prof. Dr. Gemma Masahiko,** ***Waseda University-JAPAN***	**Room 3** **Session Chair:** **Prof. Dr. Wan Mochtar** *Wan Yusoff-Universiti Kebangsaan*	**Room 4** **Session Chair:** **Prof. Bhesh Bhandari** University of Queensland-AUSTRALIA

PMM-35

Implementation of QFD in Food Supply Chain Management: A Case of Processed Cassava Product in Indonesia

I.B. Suryaningrat
Study Program of Agroindustrial Technology, Faculty of Agricultural Technology, University of Jember, Jember, 68121, East Java, Indonesia
corresponding author : suryaningrat2@yahoo.com

Abstract: Processed cassava products are common agroindustrial products in Indonesia food market. Low of product improvement is still common problem faced by cassava food producers. Evaluation of this product is strongly needed to improve quality of processed cassava products. Recently, evaluation of consumer expectation is required to be conducted to improve product quality and to answer consumer expectation as well. The objectives of this study was to evaluate the consumer's needs as a basic to prepare a sustain supply chain in processed cassava product. In this study, Quality Function Deployment (QFD) method was implemented to evaluate consumer expectation and to develop a sustainable supply chain of processed cassava products. Information were gathered from many resources such as suppliers, outlet owners, producers, workers, processing operators and marketing staff from four famous processed cassava production units. Based on House of Quality (HOQ) the results of this study showed that 4 attributes from consumers were taste, color, smell and texture which were answered by five technical responses. These results would be a basic term of sustainable of supply chain in processed cassava products. In term of supply chain, number of raw material (cassava) has strong relationship to taste, texture and aroma of product. These should be followed by an improved procurement system of raw material as a part of supply chain management system.

Keywords : QFD, supply chain, cassava

PMM-36

The perception of Layer Chicken Farmers Toward Biosecurity Standards in Anticipating Avian Influenza in Padang, West Sumatera

Tertia Delia Nova, Fuad Madarisa, Diski Bustami
Department of Animal Production and Tehnology, Andalas University, Indonesia
corresponding author : tertiaunand@ymail.com

Abstract: The objectives of this study was to assess biosecurity perception among layer chicken farmers in Padang, West Sumatera. Bird flu is caused by type A Avian influenza virus strain H5N1 in Indonesia has caused big economic loss, due to millions of poultry have been killed. Padang had experienced Avian influenza outbreak. Both observations and interview methode has been used to asses the layer chiken farmers perception. This perception was a basis to apply biosecurity standard among them. The result showed that farmer perception was good. Farmers have started to implement biosecurity. Since then, there was no Avian influenza accident in Padang that proved biosecurityis an important program. Biosecurity standard is a main strategy anticipate the entrance of bird flu virus. This strategy is consistent with goverments guidelines as stated at Directorate General of Livestock decree number 17 to preveent and eradicate bird flu.

Keywords : Biosecurity, bird flu, farmer, laying chickens

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

Date : 5th August 2015
Ref. No. : 281/SAFE-Network/SAFE2015/2015

Tertia Delia Nova#, Fuad Madarisa*, Diski Bustami#
 # Department of Animal Production and Tehnology, Andalas University,Komplek Unand Limau Manis , Padang, 25163, Indonesia. E-mail: tertiaunand@ymail.com

Dear colleague,

Acceptance to present a paper for the conference

Thank you for submitting an abstract entitled:

251/The perception of Layer Chicken Farmers Toward Biosecurity Standards in Anticipating *Avian Influenza* in Padang, West Sumatera

for the International Conference-Sustainable Agriculture, Food and Energy (SAFE2015).

We are pleased to inform you that the committee has decided that your paper has been accepted for oral presentation in this conference. The full paper is optional. If you want to publish your paper in SAFE2015 official journal, you must submit their original and unpublished full papers through the 3rd International Conference Sustainable Agriculture, Food, and Energy (SAFE2015) using EasyChair for SAFE2015 Submission System at http://safe2015.safetainability.org or by e-mail to: safetainability2013@gmail.com.

If you want to publish in IJASEIT, your manuscript is strictly limited to 4-10 pages of A4 paper in single space using Template_SAFE2015. The deadline for full paper submission is 15th September 2015.

Thank you very much and looking forward to seeing you in Ho Chi Minh City!

Yours sincerely,

TRƯỜNG ĐẠI HỌC NÔNG LÂM TP. HỒ CHÍ MINH

Assoc.Prof. Dr. Nguyen Hay
SAFE2015 Chairman

Dr.Novizar Nazir
Executive Chairman of SAFE 2015
SAFE-Network Coordinator

Perception of Laying Chickens Farm Against Biosecurity Standards Implementable to Anticipation Bird flu in Padang

Tertia Delia Nova[(1)], Fuad Madarisa[(2)], Diski Bustami[(3)]
Department of Animal Production, Faculty of Animal Husbandry
Andalas University
Padang, West Sumatra, Indonesia

ABSTRACT

This study to assess biosecurity has been done by the laying hens farm in the city of Padang West Sumatra. Bird flu is caused by type A *Avian influenza* virus strain H5N1 in Indonesia has caused huge economic loss. In addition has killed millions of poultry. Padang is capital of West Sumatra province the field of the research as well as the central of poultry laying farm and also the city has suffered bird flu outbreak. Data obtained in observations and interview using questionnaires. Based on the result of the perception of farmers are carrying out research in the application of biosecurity standards. The anticipation of bird flu, although farmers haven't implemented thoroughly though so farmers have started trying to implement biosecurity. It is proved that biosecurity is an important program to apply in poultry farm business in anticipation of the entry the bird flu virus. This is consistent with the Directorate General of Livestock No. SK 17 guidelines for prevention strategies control and eradication of bird flu, where biosecurity is main program 9 of strategies step.

Keywords: Perceptions , chickens hens farm, bird flu

1. INTRODUCTION

Bird flu or *Avian influenza* is an infections diseases among domestic birds. Bird flu is caused by type A *Avian influenza* virus strain H5N1, which has caused huge economic loss in Indonesia killing millions of poultry. Padang is the capital of West Sumatra province. It is the central of poultry laying farm and also the city that suffered bird flu outbreak in 2004 and 2008. Data were obtained from observations and interviews using questionnaires. The result indicates the perception of farmers about the application of biosecurity standards and their intension to implement biosecurity. It is proved that biosecurity is an important program to apply in poultry farm business in anticipation of the entry the bird flu virus. This is consistent with the Directorate General of Livestock No. SK 17 guidelines for prevention strategies control and eradication of bird flu, where biosecurity is main program of 9 strategies stept

Poultry losses due to bird flu (A*vian influenza*), due to declining consumer demand that result from chicken products because of fear based issues not argued that the bird flu zoonotic diseases

that can be transmitted from chickens to humans if humans consuming the poultry products (Alexander 2007). Transmission of avian influenza virus from infected chickens transmitted to chickens at the farm is largely determined by environmental factors. Termination of the bird flu virus cycle is an attempt on biosecurity measures aimed at preventing or reducing transmission of the disease. We know that the *Avian influenza* virus is a weak virus outside the body of the host and can be easily killed unstable at extreme pH conditions and heat but can survive for long periods in cold or humid conditions (Lockhart 2008).

Situation and the development of *Avian influenza* virus in Indonesia has reached alarming levels (Deptan, 2007) associated with the presence of several regions in Indonesia are infected with bird flu, such as the city of Padang. City of Padang in West Sumatra Province which is the endemic areas of bird flu. It is supported by its location as the traffic between the provinces of North Sumatra, Jambi and Riau. New bird flu coming to West Sumatra since 2004 till now continues to happen. Areas that are infected with bird flu was recorded in eleven districts / cities: Padang Panjang, Bukittinggi and Padang, District Padang Pariaman, Damasraya, Sawah Lunto Sijunjung, Tanah Datar, Agam and Pasaman (Department of Animal Husbandry of West Sumatra Province in 2007).

Bird flu eradication efforts have been made but have not been able to inhibit the spread of bird flu, it is due to the implementation of biosecurity measures as a whole (WHO 2005). Due to the weakening of the application of the bio-security in poultry bird flu (*Avian influenza*) in 2007 appears again after starting to subside in 2005 (WHO 2007). Biosecurity is a security measure to poultry, through safeguarding the environment and the people who are involved in the maintenance cycle (Breytenbach 2005). Decisions must be taken quickly and precisely in order to prevent the spread of avian influenza so that further reduce losses for poultry breeders. Companies that implement biosecurity poultry were still able to survive and keep producing. Combating environmental health caused bird flu in humans resulted in the Department of Health issued the policy measures and biosecurity, sanitation hygiene and livestock as well as setting up medical facilities for patient care, the intensification of surveillance epidemiology and support each other in a variety of activities and laboratory diagnosis.

2. METHODOLOGY.

The farmers perception research on application of biosecurity to determine the extent to which perceptions of chickens farmers on the application of biosecurity in the poultry sector 3, then take as many as 5 of respondent firms laying chickens farms and 5 workers. Selection survey respondent by purposive sampling laying chicken farm company which has a population over 15.000 chickens.

The method used in this study a survey method, which is a critical investigation to obtain a good description of an issue in the research area. Data was

collected using interview techniques directly to the respondent by structured questions in the questionnaire. Data collected of primary and secondary data form. Primary data were collected by conduction structured interview with farmers firs pre-prepare questionnaire. While the secondary data obtained trough agencies associated with the research.

The number of respondents and the population of laying chickens in 3 sector the city of Padang on each farm show in Table 2.1

Table 2.1 The location and numbers of respondent

No	District	Poultry name	Number respondent	Chickens population
1	Pauh	Firdaus	2	80.000
		Farm	2	30.000
		Afdefead Farm		
2	Kuranji	Jumaidi Farm	2	66.000
3	Koto Tangah	Berial Farm	2	19.000
		Nanda Farm	2	15.500

Examination to extent in the perception in poultry 3 sector then using Agricultural Minister Regulation No. 28/Permentan/OT.140/05/2008. About Planing and Structuring Guidelines Compartment Poultry Business Zone. Used a baseline study in which a grain of regulatory groups divided according the hierarchy of uses in implementation of the field the make score calculated quantitative.

Data Analysis

The farmer characteristics descriptive described using quantitative analysis is data that is expressed in tabulation and sentences form (Sugiono 1999).

The farmer perception use qualitative descriptive traditional and quantitive analysis using a Likert scale , the scale using the measure attitude , income and perception of person or group on social phenomena. (Sugiono 1999) .

The Likert scale instrument can be a statement that is presented by tabulations form based in variable indicators.

While the relationship between the characteristics of respondent to the perception of farmers viewed using Product Moment Correlations Test *(r)*, which is useful to define a quantity that expresses how influence the relationship of variable to another. So it is doesn't matter whether a particular variables depends on to another. Symbol of the scale is the correlation coefficient **r** called (Husein, 2004).

Then to see the relationship between the characteristics of respondent to perceptions farmer analysis using Product Moment Correlations. Useful determining a quantity that expresses how to influence relations of a variable to another . So it is doesn't matter whether a particular variables depends on to another. Symbol of the scale is the correlation coefficient is **r** called with parameter **n** whereas symbol **rho** read.

The indicator in this study each variable has a statement that the respondent should be answer according to their opinions.

The formula r is as follows:

$$r = \frac{n \sum XY - \sum X \sum Y}{\sqrt{(n \sum X^2 - (\sum X)^2 (n \sum Y^2 - (\sum Y)^2)}}$$

RESULT AND EXPLANATION

Poultry biosecurity condition in Padang

Based on the study result that poultry biosecurity condition in Padang involved sector 3 and 4 including limiting activity and minimize the risk of *Avian influenza* virus. Scale of poultry farm was a large , around 15 000 to 80 000 chickens. Where stable conditions a still very dependent on the state of the environment, the name is open cage system.

According to our survey based on the records from the Department of Animal Husbandry Padang, poultry farm industry report that poultry farmers in Padang have never been attacked by the bird flu outbreak or *Avian influenza* (AI) because their farm have implemented vaccination. The statement accordance to Zainuddin dan Wibawan (2007) that generally commercial poultry farms in Indonesia, including in sector 3, in biosecurity implementing sober and still are contact with other birds or people entering to the farm.

Correlations the characteristics of respondent and perception toward biosecurity implementation in against bird flu.

Based formulation of the problem of the correlation with the perception of the characteristics respondent to the application layer chickens farmers biosecurity in anticipation of bird flu in city of Padang. Perception farmers laying hens against the application of biosecurity is assume to have correlations with its characteristics respondent age, eduction level, farming experience, and number of dependents. To determine the extent of correlations, in the study used to the Product Moment Correlations test (**r**).

Correlations age of respondent with perception application biosecurity

Calculation result of research using Product Moment Correlation (r) obtained value of 0.81. The means there is positif linear correlation of age and perception farmer hens laying against the application of biosecurity. Husein (2004) states if the value **r > 0** means that there has been a positif linear correlation the variable x and y, meaning the higher of age the greater the perceptions. Conclusions that age influence to perception farmer laying hens 3 sector on the implementations of biosecurity.

Correlations education level respondent perception application of biosecurity.

Education level of respondent through there was correlation perceptions on the implementation of biosecurity. But to assess the relations couldn't use the product moment correlations test because the data representing the educations variables are not available, where 9 (nine)

respondent last high school education and 1 (one) respondent last college education.

Based on data from the perception of all respondent have a very good perception of the applications biosecurity. Concluded the high education is an education that is adequate so that the perception of farmer are getting better.

Correlation respondent experience on application biosecurity.

Experience of raising chickens is a length of time maintaining laying hens. Experience is assumed to have relationship with the perception meaning the longer the experience is better the perception of respondent.

The result of studies using product moment correlations (r) the means value of r is 0.54 close relationship with the perception of the experience in the application of biosecurity. Husein said, if **r > 0** is mean positive linear relationship of the variable x and y. Meanwhile, according to Mason and Douglas (1996), if the value of r from 0,01 to 0,20 then it means that the correlation is very low.

Concluded that the experience of having a relationship with the perception of livestock breeder laying hens of sector 3 the applications of biosecurity in Padang

Correlation of number family members to the chicken farmer perception on the implementation of biosecurity.

Result of studies using product moment correlation (r) values obtain r = 0,40 means that the number of family members there is a positif linear relationship with perceptions. According (Husein 2004) the value of r > 0 means that there has been a positive linear corelation for variable x and y.

Conclusion that the number of family number have a correlation with the perception in the sector 3 poultry laying hens to the application of biosecurity.

Correlation to total livestock population perception on the implementation of biosecurity

Results of research trials product moment correlation (r) values obtained **r** is 0.15, meaning that there has been a positive linear correlation. It means that the higher the population, the perception will also be higher awareness of the importance biosekurity for poultry.

In the study proved that the populations is positively related to the perception breeder laying hens 3 sector on the implementation of biosecurity.

CONCLUSION

Based on the research result can be concluded as follows:

1. Poultry farm laying hens biosecurity system involved sector 3 in Padang.

2. In 2008, the poultry laying hens farm has been implementing biosecurity through vaccination and never contacted the bird flu outbreak.

3. Poultry farmer perception on the implementing on biosecurity to against bird flu,in Padang overall had very good perception

REFERENCE.

Alexander, D. (2007), 'Summary of avian

influenza activity in Europe, Asia, Africa and Australasia, 2002 – 2006', Avian Diseases 51, 161 – 166.

Breytenbach, J. (2005), Vaccination and Biosecurity is The Key, Poultry World. Agriculture Journals, 159,4. 33.

Delianova, T., M Watanabe, (2009), Modeling and analysis of bird flu outbreak within poultry farm. http://www.ed.kagawa-u.ac.jp/~HP master/campus.htm University of Kagawa. Kagawa Japan.

Delianova, T., H. Mawengkang (2009), Modeling of epidemic transmission and predicting the spread of pathogenic avian flu between farms. The IMT-GT 5th International Conference on Mathematics. Statistics and Applications. June 9-11, 2009 Bukittinggi. Indonesia.

Delianova, T., H. Mawengkang, M. Watanabe, (2009), Control strategy of *Avian influenza* based on modeling and simulation, 14th International Congress on Computational and Applied mathematics (ICCAM2009) 29 September-2 October, 2009, Kervansaray Hotel, Lara, Antalya, Turkey

Delianova, T., H Mawengkang, M Watanabe, (2010), MODELING AND ANALYSIS OF BIRD FLU OUTBREAK WITHIN A POULTRY FARM, Proceedings of the First International Conference on Bioinformatics, Editors: Ana Fred and Joaquim Filipe and Hugo Gamboa, 2010 INSTICC - Institute for Systems and Technologies of Information, Control and Communication, 96--101, 2010. Valencia, Spain

Delianova,T., H. Mawengkang, M. Watanabe, (2010), Study on infection process of bird flu wihtin poultry farm based on modeling and simulation Proceedings, International Conference on Environmental Research and Technology (ICERT 2010), 2-4 JUNE 2010, Parkroyal, Penang, Malaysia, page 435-441.

Delianova,T., H. Mawengkang, M. Watanabe (2010), Study on bird flu outbreak within a poultry farm with host-virus model. The 15th Biennial Computational Techniques and Applications Conference. CTAC2010 28 Nov - 1 Dec 2010, University of New South Wales (UNSW), Sydney Australia

Delianova,T., Herman Mawengkang, Masaji Watanabe. (2010)., Strategy against bird flu outbreak within poultry farm based on modeling and simulation. 25-27 December 2010. Science and Technology, Chuo Campus University Korakuen. Tokyo, Japan.

Delianova, T., H. Mawengkang, Masaji Watanabe. (2011), Study of host-virus interaction in bird flu transmission within a poultry farm. 30 January 2011 Tyuugoku Annual Society Jepang Shikoku Branch Meeting, 30 January 2011, University Naruto building bursa Research. Naruto. Japan

Deptan. (2007), Avian Influenza. www.deptan.go.id. (3 Mei 2010)]

Deptan, (2008), Peraturan Mentri Peranian Nomor 28/ Permentan/OT. 140/5/2008. Tentang, Pedoman Penataan Kompartemen dan Penataan Zona perunggasan/.

Husein, U. 2004. Metode penelitian untuk skripsi dan tesis bisnis. Jakarta: PT Raja Grafinda Persada.

Mason, R. D., Douglas A. 1996. Tehnik statistika untuk bisnis dan ekonomi. Erlangga Jakarta 1996