



2016

"Small and Medium-sized
Enterprises Competitiveness"

ISBN 978-602-7577-70-1



PROCEEDING

INTERNATIONAL CONFERENCE

Agribusiness Development for Human Welfare



UMY

Universitas
Muhammadiyah
Yogyakarta

Unggul  Islami

Trusmi, Jl. No. 142, Sleman, Yogyakarta 55584

Organized by:

Department of Agribusiness, Faculty of Agriculture
Universitas Muhammadiyah Yogyakarta

Supported by:



PROCEEDING INTERNATIONAL CONFERENCE

AGRIBUSINESS
DEVELOPMENT FOR
HUMAN WELFARE

*“Small and Medium-sized
Enterprises Competitiveness”*



Agribusiness Development
for Human Welfare

ISBN 978-602-7577-70-1



EDITOR TEAM

Siti Yusi Rusimah
Achmad Fachruddin
Rohandi Aziz
Dara Rosalia

ADDRESS

Agribusiness Department
Agriculture Faculty
Universitas Muhammadiyah Yogyakarta

Jl. Lingkar Selatan, Tamantirto, Kasihan, Bantul, Yogyakarta, 55183
Phone. 0274-387656 (ext. 201) Fax. 0274-387646
e-mail: adhw2016@umy.ac.id

EDITOR FOREWORD

The economic integrations by ASEAN certainly have given a major influence on Small and Medium-sized Enterprises (SMEs). Beside economic integration in the form of free trade area (FTA) that has been going on since the early 2000s, economic integration in the form of ASEAN Economic Community (AEC) has been ongoing since the beginning of 2016. Through this integration, SMEs have opportunity to expand access to markets, technology, and capital. But at the same time SMEs are required to improve their competitiveness in order to survive in the market.

In order to explore ideas, concept, and innovations related to the competitiveness of SMEs, International Conference on Agribusiness Development for Human Welfare (ADHW 2016) was held in Yogyakarta on May 14, 2016. The conference organized by Department of Agribusiness Universitas Muhammadiyah Yogyakarta, in collaboration with Department of Agribusiness and Information System Universiti Putra Malaysia, Department of Agro-Industrial Technology Kasetsart University, Department of Agriculture Socio-Economics Universitas Gadjah Mada, Department of Agriculture Socio-Economics of Universitas Brawijaya, Indonesian Society of Agriculture Economics, Agribusiness Association of Indonesia. Hopefully proceedings of ADHW 2016 provide stimulus for increasing competitiveness of SMEs in ASEAN, especially in Indonesia.

Furthermore, we are grateful to Allah, the Sustainer of all word, who always makes it easy for our affairs. We would like to acknowledge with thanks to all the institution and individual who joined with resources and efforts in organizing the conference that resulted in the papers which are published in this proceeding. Special thanks to all authors and discussants who contributed with their intellectual capital and responded to our call papers. Thanks and acknowledgment are also due to all reviewers of the conference who helped in evaluating submitted papers; and to the members of the Organization Committee, who ensured smooth execution of the event.

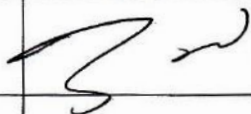
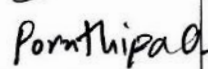

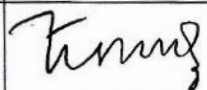
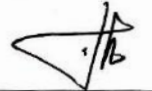
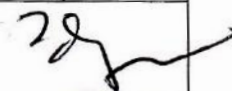
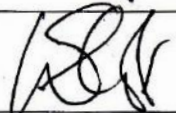
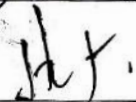
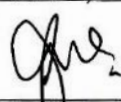

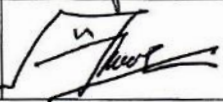
May 30, 2016

Editor

LIST OF REVIEWERS

1. Prof. Dr. Mad Nasir Shamsudin (Universiti Putra Malaysia)
2. Prof. Dr. Zaenal Abidin Mohamed (Universiti Putra Malaysia)
3. Dr. Ismail Abd. Latif (Universiti Putra Malaysia)
4. Dr. Juwaidah Sharifudin (Universiti Putra Malaysia)
5. Assist. Prof. Dr. Amin Mahir Abdullah (Universiti Putra Malaysia)
6. Assist. Prof. Dr. Nitty Hirawaty K. (Universiti Putra Malaysia)
7. Assist. Prof. Dr. Parthana Parthanadee (Kasetsart University)
8. Assist. Prof. Dr. Pornthipa Ongkunaruk (Kasetsart University)
9. Dr. Jumpol Vorasayan (Kasetsart University)
10. Prof. Dr. Ir. Masyhuri (Universitas Gadjah Mada)
11. Prof. Dr. Ir. Irham, M.Sc. (Universitas Gadjah Mada)
12. Dr. Jamhari, SP. MP. (Universitas Gadjah Mada)
13. Dr. Jangkung HM, SP.M.Ec. (Universitas Gadjah Mada)
14. Subejo, SP, M.Sc., Ph.D. (Universitas Gadjah Mada)
15. Dr. Ir. Rini Dwiastuti, M.S. (Universitas Brawijaya)
16. Ir. Edi Dwi Cahyono, M.Sc., Ph.D. (Universitas Brawijaya)
17. Wisynu Ari Gutama, S.P., M.MA. (Universitas Brawijaya)
18. Hery Toiba, S.P., M.P., Ph.D. (Universitas Brawijaya)
19. Yuniar Khasanah, M.Sc. (Lembaga Ilmu Pengetahuan Indonesia)
20. Lusty Istiqamah, M.Biotech (Lembaga Ilmu Pengetahuan Indonesia)
21. Ir. M. Kismuntono (Lembaga Ilmu Pengetahuan Indonesia)
22. Dr. Ir. Sriyadi, MP. (Universitas Muhammadiyah Yogyakarta)
23. Dr. Ir. Widodo, MP. (Universitas Muhammadiyah Yogyakarta)
24. Dr. Ir. Indardi, M.Sc. (Universitas Muhammadiyah Yogyakarta)
25. Dr. Ir. Triwara BS, MP. (Universitas Muhammadiyah Yogyakarta)
26. Dr. Aris Slamet Widodo, SP. MSc. (Universitas Muhammadiyah Yogyakarta)

ATTENDED REVIEWER

NO	NAME	INSTITUTION	SIGNATURE
1	Prof. Dr. Zaenal Abidin Mohamed	UPM	
2	Assistant. Prof. Dr. Pornthipa Ongkunaruk	Kasetsart University	
3	Prof. Dr. Ir. Irham, M.Sc	UGM	
4	Dr. Jangkung HM, SP. M.Ec	UGM	
5	Dr. Ir. Lestari Rahayu Waluyati, MP	UGM	
6	Ir.Edy Dwi Cahyono, M.Sc., PhD	UNIBRAW	
7	Wisnyu Ari Gutama, S.P, M.MA	UNIBRAW	
8	Hery Toiba, S.P.,M.P.,Ph.D	UNIBRAW	
9	Yuniar Khasanah, M.Sc	LIPI	
10	Lusty Istiqamah, M.Biotech	LIPI	
11	Ir. M. Kismuntono	LIPI	

PREFACE

Assalaamualaikum, Warahmatullaahi., Wabarakaatuh.
Dear Honorable Governor of Yogyakarta Special Province
Dear respectable Prof. Dr. Zainal Abidin Mohamed
Dear respectable Asist. Prof. Pornthipa Ongkunaruk
Dear respectable Rector of UMY Prof. Dr. Bambang Cipto, MA.
Dear all invited Guests, Speakers, and Participants of International seminar of ADHW 2016.

Alhamdulillah, all praise be to the Almighty God, so that we can be gathering here today at Muhammadiyah University of Yogyakarta in order to attend the Conference on Agribusiness Development for Human Welfare (ADHW) 2016.

Ladies and Gentlemen,

On behalf of the committee, I would like to say welcome to this International Conference on ADHW 2016 and thank you for attending our invitation.

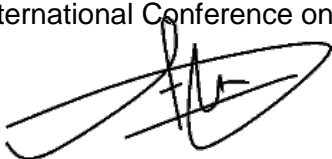
Especially, we are grateful to invited speakers, Prof. Zainal Abidin Mohamed and Asist. Prof. Pornthipa Ongkunaruk, for their willingness to share information and thoughts in this conference. As a bit report, that this conference has been attended by 85 speakers coming from five countries.

This conference entitled "Small and Medium-sized Enterprise Competitiveness". ASEAN Economic Community is the largest economic integration that is going to be implemented at the beginning of 2016 (December 31, 2015). Through this integration, SMEs will have opportunity to expand access to markets, technology, and capital. But at the same time SMEs are required to improve their competitiveness in order to survive in the market. We expect that this seminar is capable of producing thoughts building SMEs within ASEAN, especially Indonesia, to face the free trade.

This event can be done by support and efforts from all sides. Therefore, I would like to say thank you to all committee members having worked hard to conduct this event. We, as the organizer committee, do apologize when there is a shortage in conducting this event.

Wassalamualaikum, Warahmatullaahi., Wabarakaatuh.

Chairman
International Conference on ADHW 2016



Dr. Aris Slamet Widodo, SP., MSc.

WORDS OF WELCOME

Assalamu'alaikum warahmatullahi wabarakatuh

Alhamdulillah, all praise be to Allah SWT, who has given us His blessings so that this International Seminar of Agribusiness Development for Human Welfare (ADHW) 2016 entitled "Small and Medium-sized Enterprises Competitiveness" can be conducted. This International Conference is held in cooperation among Agribusiness Study Program of Muhammadiyah University of Yogyakarta with Putra University of Malaysia (UPM), Kasetsart University (KU), Association of Indonesian Agricultural Economy (PERHEPI), and Agribusiness Association of Indonesia (AAI), Universitas Gadjah Mada (UGM) and Universitas Brawijaya (UB).

Countries of ASEAN members like Indonesia, Malaysia, and Thailand have more than 90% Small and Medium-sized Enterprises (SMEs). In general, SMEs play important role in economic developments such as in terms of employment, added value, improve foreign exchange, and economic growth. For Indonesia, the role of SMEs is limited to employment and added value, while the foreign exchange from SMEs is still low. According to the General Director of SMEs of Industrial Ministry, in 2013 the total SMEs being able to pass through export market is just under 5 percent. For that required many breakthrough and innovation so that the role of SMEs becomes real economic development, especially in Indonesia, and generally in ASEAN countries.

On behalf of Agribusiness Department of Universitas Muhammadiyah Yogyakarta, we would like to express our gratitude Putra University of Malaysia (UPM), Kasetsart University (KU), Association of Indonesian Agricultural Economy (PERHEPI), Agribusiness Association of Indonesia (AAI), Universitas Gadjah Mada (UGM) and Universitas Brawijaya (UB) for all supports, sponsors, and all committee members having worked so hard that this International Conference can be conducted.

Hopefully, these synergies coming from various parties can provide contribution for developing SMEs in Indonesia and other ASEAN countries as well.

Wassalamu'alaikum warahmatullahi wabarakatuh

Head of Agribusiness Department
Universitas Muhammadiyah Yogyakarta



Ir. Eni Istiyanti, MP.



Gubernur

Daerah Istimewa Yogyakarta

Sambutan

KONFERENSI INTERNASIONAL

“AGRIBUSINESS DEVELOPMENT FOR HUMAN WELFARE”

Yogyakarta, 14 Mei 2016

Assalamu'alaikum Wr. Wb.

Salam sejahtera untuk kita semua.

Yang Saya hormati :

- Rektor Universitas Muhammadiyah Yogyakarta;
- Para Narasumber;
- Hadirin dan Para Peserta yang berbahagia,

Puji dan syukur marilah kita panjatkan kehadirat Allah SWT karena hanya atas limpahan rahmat serta karunia-Nya, kita dapat hadir pada kesempatan acara **Konferensi Internasional “Agribusiness Development For Human Welfare”** ini dalam keadaan sehat wal’afiat.

Pada kesempatan kali ini, secara ringkas Saya akan menyampaikan mengenai industri kecil menengah nasional yang menjadi tema pada pembukaan Seminar Internasional “Agribusiness Development For Human Welfare” ini.

Hadirin dan Saudara-saudara sekalian yang Saya hormati,

Berdasarkan data BPS, pertumbuhan industri pengolahan nonmigas pada tahun 2015 secara kumulatif sebesar 5,04%; lebih tinggi dari pertumbuhan ekonomi (PDB) pada periode yang sama sebesar 4,79%. Pada periode Januari-Desember 2015, nilai ekspor produk industri pengolahan nonmigas mencapai USD 106,63 Milyar, dan nilai impor mencapai USD 108,95 milyar, sehingga neraca perdagangan industri pengolahan nonmigas pada periode yang sama sebesar USD 2,32 milyar (neraca defisit).

Usaha pemerintah untuk memperkecil defisit di atas, salah satunya dengan cara memberdayakan Industri Kecil dan Menengah (IKM) yang merupakan bagian penting dalam perkembangan industri nasional. Sampai saat ini, Industri Kecil dan Menengah

telah berkontribusi sebesar 34,82% terhadap pertumbuhan industri pengolahan nonmigas secara keseluruhan.

Angka ini dapat tercapai karena dukungan lebih kurang 3,6 juta unit usaha, yang merupakan 90 persen dari total unit usaha insutri nasional. Jumlah unit usaha tersebut telah mampu menyerap tenaga kerja sebesar 8,7 juta orang, yang tentunya berdampak pada meningkatnya ekonomi nasional serta mengurangi kemiskinan.

Industri Kecil dan Menengah (IKM) memiliki peran yang strategis dalam perekonomian nasional. Hal ini sejalan dengan Visi Pemerintah dalam Rencana Pembangunan Nasional Jangka Menengah (RPJMN) 2015-2019 yaitu *“Terwujudnya Indonesia yang berdaulat, mandiri, dan berkepribadian berlandaskan gotong royong”*.

Untuk lebih meningkatkan peran tersebut, Penumbuhan dan Pengembangan Industri Kecil dan Menengah diarahkan untuk memiliki tujuan jangka menengah guna mewujudkan industri kecil dan industri menengah yang berdaya saing, berperan signifikan dalam penguatan struktur industri nasional, pengentasan kemiskinan dan perluasan kesempatan kerja, serta menghasilkan barang dan/atau jasa Industri untuk keperluan ekspor.

Hadirin dan Saudara-saudara sekalian,

Awal tahun ini, kita telah memasuki era Masyarakat Ekonomi ASEAN (MEA). Dengan demikian, perekonomian nasional akan langsung bersaing dengan para pelaku pasar di kawasan ASEAN. Produk dan jasa termasuk investasi negara-negara anggota telas bebas memasuki pasar di kawasan ASEAN.

Dalam rangka menghadapi hal tersebut, Pemerintah mengambil langkah-langkah strategis berupa peningkatan daya saing industri dan mendorong investasi di sektor industri; di mana peningkatan daya saing industri itu sendiri dilakukan melalui penguatan struktur industri dengan melengkapi struktur industri yang masih kosong serta menyiapkan strategi ofensif dan defensif dalam akses pasar.

Pemerintah telah melakukan Penguatan Sektor IKM dengan strategi ofensif dan defensifnya melalui beberapa program pelaksanaan, diantaranya antara lain: Penumbuhan Wirausaha Baru; Pengembangan IKM melalui Pengembangan Produk IKM serta Peningkatan Kemampuan Sentra dan UPT; Pemberian Bantuan Mesin dan Peralatan Produksi; Perluasan Akses Pasar melalui Promosi dan Pameran; Fasilitasi Pendaftaran Hak Kekayaan Intelektual; Fasilitasi Sertifikasi Mutu Produk dan Kemasan; serta Fasilitasi Pembiayaan melalui Skema Kredit Usaha Rakyat (KUR).

Saya berharap agar berbagai program-program pemerintah tersebut dapat didukung secara sinergis oleh seluruh komponen masyarakat. Untuk itu, Saya berpesan kepada Saudara-saudara sekalian agar semua program pemerintah dalam bidang

Industri, khususnya dalam program pemberdayaan Industri Kecil dan Menengah, didukung dengan sepenuh hati, agar dapat lebih bermanfaat bagi masyarakat dalam rangka pengembangan industri kecil menengah.

Hadirin dan Saudara-saudara sekalian yang Saya hormati,

Demikian beberapa hal yang dapat Saya sampaikan. Akhirnya dengan memohon ridho Allah Subhanahu Wata'ala, seraya mengucap "*Bismilahirrahmanirrahim*", **Konferensi Internasional "Agribusiness Development For Human Welfare"** dengan ini secara resmi Saya nyatakan dibuka. Semoga Allah SWT memberikan petunjuk, bimbingan, perlindungan dan kemudahan dalam setiap langkah dan upaya kita. Amien.

Sekian dan terima kasih.

Wassalamu'alaikum Wr. Wb.

Yogyakarta, 14 Mei 2016
GUBERNUR
DAERAH ISTIMEWA YOGYAKARTA



HAMENGKU BUWONO X

TABLE OF CONTENTS

EDITOR FOREWORD	i
LIST OF REVIEWERS	ii
PREFACE	iv
WORDS OF WELCOME	v
WELCOME FROM GOVERNOR OF YOGYAKARTA	vi
TABLE OF CONTENTS	ix
RICE SELF-SUFFICIENCY IN INDONESIA: AN ANALYSIS ON BUDGET ALLOCATION AND THE ACHIEVEMENT	1
<i>Sri Nuryanti</i>	
MODELING OF COOPERATION TO IMPROVE RURAL ECONOMIC IN LANGKAT... ..	8
<i>Muhammad Buchari Sibuea</i>	
GRANARY GROUP PERFORMANCE IMPACT TO THE PRICE AND FOOD SELF- SUFFICIENCY ON THE FARM HOUSEHOLDS	20
<i>Sri Mardiyati, Jamhari, Jangkung Handoyo Mulyo Dwidjono Hadi Darwanto</i>	
ANALYSIS OF AGRIBUSINESS SYSTEM AND COMPETITIVENESS OF GROUPER FISH IN INDONESIA.....	28
<i>Grace Maharani Putri, Venty F. Nurunisa</i>	
ANALYSIS OF COMPETITIVENESS ASEAN RICE TRADE IN THE ERA OF ASEAN ECONOMIC COMMUNITY.....	36
<i>Mohammad Natsir, Sri Mardiyati</i>	
PARTICIPATORY EXTENSION AND FARMERS ATTITUDE CHANGE (CASE PASSION FRUIT FARMERS IN THE VILLAGE BATU BELERANG SINJAI DISTRICT)	42
<i>Muh. Arifin Fattah and Amruddin</i>	
THE RELATIONSHIP BETWEEN EMPOWERMENT OF FARMER GROUP ASSOCIATION (GAPOKTAN) AND MANGO FARM INCOME	47
<i>Achmad Faqih, Nurul Atikah Fauzi Siti Aisyah</i>	
EFFECTIVENESS OF TRAINING MODEL ON CRAFTSMEN CALLIGRAPHY GOAT LEATHER IN AN ATTEMPT TO STRENGTHEN THE COMPETITIVENESS IN SUKOHARJO, INDONESIA	57
<i>Shanti Emawati, Endang Siti Rahayu, Sutrisno Hadi Purnomo, Ayu Intan Sari</i>	
EFFORTS TO IMPROVE COMPETITIVENESS OF WOMEN FARMERS GROUP "MELATI" IN SENDANGSARI VILLAGE, PENGASIH DISTRICT, KULON PROGO REGENCY	62
<i>Siti Hamidah, Indah Widowati</i>	
INSTITUTIONAL CHANGE AND ITS EFFECT TO PERFORMANCE OF WATER USAGE ASSOCIATION IN IRRIGATION WATER MANAGERMENTS	68
<i>Mohammad Rondhi, Yasuhiro Mori, Takumi Kondo</i>	
FOOD PROCESSING INDUSTRY EMPOWERMENT EFFECTIVENESS IN BANGUNTAPAN SUB-DISTRICT, BANTUL, YOGYAKARTA SPECIAL REGION	76
<i>Sapto Husodo, Amie Sulastiyah, Galuh H.E. Akoso</i>	
URBAN DWELLER PERCEPTION TOWARDS URBAN AGRICULTURE.....	85
<i>Ida Naziera Ngahdiman, Rika Terano, Zainal Abidin Mohamed</i>	

EFFECTIVENESS OF WELFARE DEVELOPMENT SCHEME ON QUALITY OF LIFE TO RURAL POOR COMMUNITY IN MALAYSIA.....	93
<i>Mohd Nizam Abdul Aziz, Fazlin Ali, Zainal Abidin Mohamed and Hanina Halimatusaadiyah Hamsan</i>	
ASSOCIATION BETWEEN SOCIO-DEMOGRAPHIC CHARACTERISTICS WITH PINEAPPLE FARMER'S KNOWLEDGE, SKILLS AND PRACTICES IN MALAYSIA.	106
<i>Melissa Alina Yusoff, Norsida Man, Nollila Mohd Naw, Khadijat Jaji</i>	
MARKET STRUCTURE AND ANALYSIS OF SEA FISH MARKETING AT DISTRICT OF JEMBER.....	112
<i>Syamsul Hadi, Edy Sutiarto, dan Henik Prayuginingsih</i>	
MARKET STRUCTURE, EFFECTIVENESS, AND EFFICIENCY OF THE RUBBER RAW MATERIALS MARKETING IN MUSI RAWAS DISTRICT	121
<i>May Shiska Puspitasari</i>	
ANALYSIS OF BEEF SUPPLY CHAIN MANAGEMENT AT AGRIBUSINESS BASED SLAUGHTERHOUSE IN UPTD OF ANIMAL SLAUGHTERHOUSE OF PALU	129
<i>Muh Zulfadhli Prasetyo, Yulianti Kalaba, Lien Damayanti, dan Erny</i>	
ANALYSIS OF INFLUENCE OF MARKETING MIX AGAINST PURCHASE DECISION OF GROWING UP MILK ON THREE SOCIO-ECONOMIC CLASS IN MALANG	139
<i>Sunardi, Jabal Tarik Ibrahim, Anas Tain</i>	
TRANSACTION COST ANALYSIS ON CARDAMOM MARKETING IN PADASARI VILLAGE, CIMALAKA DISTRICT, SUMEDANG REGENCY	152
<i>Ermalinda Zebua, Juarini, and Nanik Dara Senjawati</i>	
RICE SEEDS MARKET STRUCTURE IN EAST JAVA	161
<i>Rini Dwiastuti, Riyanti Isaskar, Nur Baladina, Tri Wahyu Nugroho</i>	
NUTMEG'S (<i>MYRISTICA FRAGGAN HAITT</i>) ANALYZE MARKETING MARGIN AND EFFICIENCY OF TANJUNG SANI VILLAGE TANJUNG RAYA SUBDISTRICT AGAM DISTRICT	177
<i>Devi Analia, Faidil Tanjung, Syofyan Fairuzi dan Ramita Sari Pimura</i>	
THE EFFICIENCY OF SUPPLY CHAIN EMPING MELINJO IN BANTUL REGENCY YOGYAKARTA	183
<i>Eni Istiyanti, Diah Rina Kamardiani</i>	
VALUE CHAIN OF PINEAPPLE IN MALAYSIA.....	191
<i>Norsida Man, Nollila Mohd Naw, Khadijat Jaji, Melissa Alina Yusoff</i>	
DYNAMIC SYSTEM OF INDONESIAN HALAL MEAT INDUSTRY: SUSTAINABLE SUPPLY CHAIN MANAGEMENT PERSPECTIVE	206
<i>Akhmad Mahbubi, Pita Merdeka</i>	
ANALYSIS OF THE PROFITABILITY OF DAIRY FARMERS BASED ON THE SCALE OF LIVESTOCK OWNERSHIP IN DISTRICT SEMARANG	216
<i>Mukson, S.I.Santoso, H.I.Nisa, H. Setiyawan and M. Handayani</i>	
DEVELOPMENT STRATEGY OF LEADING COMMODITY THROUGH COMMUNITY-BASED ENTERPRISE IN INDONESIA-MALAYSIA BORDER AREA.....	223
<i>Jangkung Handoyo Mulyo, Irham, Hani Perwitasari, Fatkhayah Rohmah</i>	
BUSINESS DEVELOPMENT STRATEGY SOYBEAN SAUCE PRODUCTION IN CAP BAWANG SOY SAUCE COMPANY AT NGAWI REGENCY	230
<i>Feti Munika Sakti, Mohamad Harisudin, Raden Rara Aulia Qonita</i>	
FOREIGN LABOR RECRUITMENT IN OIL PALM PLANTATION IN MALAYSIA	241
<i>Marlia Musa, Amin Mahir Abdullah, Mohd Mansor Ismail</i>	

MICRO ENTREPRENEURS' INTENTION TO BECOME MEMBER OF MICROCREDIT SCHEME WITH EDUCATIONAL TRAINING AND MOTIVATIONAL PROGRAM.....	250
<i>Rika Terano, Zainalabidin Mohamed and Fatin Najihah Mohd Tammili</i>	
FARMING INCOME ANALYSIS OF DRY LAND IN THE GUNUNGKIDUL DISTRICT	257
<i>Aris Slamet Widodo, Retno Wulandari</i>	
ANALYSIS OF FACTOR THAT INFLUENCE THE DEMAND FOR ORGANIC VEGETABLES IN MEDAN	264
<i>Sasmita Siregar, Hadriman Khair, Yudha Andriansyah Putra</i>	
RICE CONSUMER BEHAVIOR IN THE MUSI RAWAS DISTRICT	272
<i>Zaini Amin</i>	
ANALYSIS OF CONSUMER PERCEPTIONS AGAINST LOCAL AND IMPORT FRUITS IN MEDAN.....	280
<i>Hadriman Khair</i>	
CONSUMERS' INTENTION TO PURCHASE GENETICALLY- MODIFIED SOYBEAN PRODUCTS IN MALAYSIA.....	288
<i>Welson Chin Vui Son, Kelly Wong Kai Seng, and Juwaidah Sharifuddin</i>	
CONSUMER PREFERENCE TOWARDS ORGANIC VEGETABLES AT SUPER INDO SULTAN AGUNG YOGYAKARTA.....	299
<i>Nisa Murty Andari, Widodo, Sriyadi</i>	
STRENGTHENING THE ECONOMIC OF FOREST FRINGES COMMUNITY THROUGH MODEL FOR ENHANCING LOCAL CATTLE COMPETITIVENESS	306
<i>Teguh Hari Santosa, Toni Herlambang, Nurul Qomariah, dan Oktarina</i>	
FACTORS AFFECTING THE PRODUCTION AND BENEFIT ON THE PLANTING SYSTEM OF JAJAR LEGOWO AND TEGEL IN THE DISTRICT MUSI RAWAS	317
<i>Nila Suryati</i>	
PLANTING DISTANCE AND DOSE OF ORGANIC MANURE ON THE SOIL CHEMICAL PROPERTIES AND YIELD OF LOWLAND RICE	324
<i>Abdul Azis and Damasus Riyanto</i>	
TECHNOLOGY ADOPTION OF HIGH QUALITY GREENBEANS SEED BY FARMERS' HOUSEHOLD IN CENTRAL JAVA.....	334
<i>Wiludjeng Roessali, Wahyu Dyah Prastiwi, Tutik Dalmyatun</i>	
PRODUCTION EFFICIENCY OF IRRIGATION LOWLAND ORGANIC PADDY FARMING SYSTEM AT BAROKAH FARMER'S GROUP IN SEMARANG REGION.	340
<i>Titik Ekowati, Edy Prasetyo, and Bambang Trisetoyo Eddy</i>	
THE FARMER'S KNOWLEDGE AND ATTITUDES FOR ENVIRONMENTAL FRIENDLY OF SHALLOT CULTIVATION IN BALI	346
<i>Nyoman Ngurah Arya, I Ketut Mahaputra, Suharyanto, Jemmy Rinaldi</i>	
THE ANALYSIS OF A VERTICALLY INTEGRATED ORGANIC RICE COMPANY: A CASE STUDY IN THAILAND	354
<i>Yaniga Prasertwattanukul and Pornthipa Ongkunaruk</i>	
EFFECTIVENESS AND GROUP COMMUNICATION NETWORK.....	361
<i>Indardi</i>	
THE INSTITUTIONAL ROLE IN DISSEMINATING SITE-SPECIFIC AGRICULTURAL INNOVATION IN ACEH	368
<i>Abdul Azis, Basri AB and Sugeng Widodo</i>	

INCREASE RICE PRODUCTIVITY THROUGH MODELS OF CROPPING SYSTEMS AND THE USE OF HYBRID VARIETIES	379
<i>Suharno, Rika Nalinda</i>	
THE FARMER'S PERCEPTION TO THE USING OF TECHNOLOGY AFTER PADDY'S HARVEST IN SOUTH SULAWESI	386
<i>Irmayani, Hariyono, Nur Rahmah Safarina Hamzah</i>	
VALUATION IRRIGATION OF RICE FARMING AT UPSTREAM AND DOWNSTREAM AREAS IN SPECIAL REGION OF YOGYAKARTA	392
<i>Habibullah, Triyono, Aris Slamet Widodo</i>	
RICE FARMER'S PERCEPTION AND ITS EFFECT TOWARD INTENTION TO ADOPT ORGANIC FARMING	399
<i>Ashari, Juwaidah Sharifuddin, Zainal Abidin Mohammed, Rika Terano</i>	
FACTORS INFLUENCING THE ATTITUDES OF VEGETABLE FARMERS TOWARD THE USE OF INFORMATION AND COMMUNICATION TECHNOLOGY (ICT) IN PENINSULAR MALAYSIA.....	411
<i>Nor Haslina Nor Rizan, Amin Mahir Abdullah, Norsida Man, and Nolila Mohd Nawi</i>	

FACTORS AFFECTING THE PRODUCTION AND BENEFIT ON THE PLANTING SYSTEM OF JAJAR LEGOWO AND TEGEL IN THE DISTRICT MUSI RAWAS

Nila Suryati^{1*}

¹⁾ Departemen of Agribusiness, Faculty of Agriculture, University Musi Rawas
Jl. Kompleks Perkantoran Pemkab. MURA Kel. Air Kuti I Lubuklinggau Timur I
Lubuklinggau

*corresponding author: suryatinila@gmail.com

ABSTRACT

The purpose of this study was to analyze the factors that affect the production and benefit of the rice farming in the planting system "Jajar Legowo" and "Tegel". Survey method was used in this research. As many as 58 household of farmer were selected by using disproportionate stratified random sampling. The data were analyze by using regression model. The resulted showed that: (1) in the sistem of jajar legowo, the production and benefit was affected by the harvested area, urea fertilizer, the labor significantly, but the total using of seed, SP-36 fertilizer, and pesticide not affected significantly; (2) in the tegel sistem, the production and benefit was affected by the total using of seed, the harvested area, and labor, while the using of urea fertilizer was not affected significantly; and (3) in the Jajar Legowo System, the harvested area, the using of urea fertilizer, and labor was efficiently, while the using of seed, SP-36 fertilizer, and pesticide was inefficiently. Furthermore, in tegel system of planting, the using of seed, the harvested area, and labor was inefficiently, while the using of urea and SP-36 fertilizer, and pesticide was efficiently.

Keywords: factor affecting, production and benefit, planting system

INTRODUCTION

The main priority of agricultural development was to provide of the food need, to increase income, and to increase foreign exchange earnings. specialized in the food crops development program, the main priority was to increases paddy, corn and soybean (Institute for Agricultural Technology, 1992).

To increase the production of food crops faced with various problems. Droughts and floods had threaten production in some areas, as same as in the land degradation in most of the planting area had been an issue that it should be solved. The increasing program of food production should be linked to efficiency, competitiveness, and environmental sustainability. It was intended to increase farmers' income, competitiveness and to develop sustainable farming (Suyamto, 2007)

Rice (*Oryza sativa L.*) was a staple food in Indonesia, because about 95% of Indonesia's population consumes the rice.

The high consumption of rice caused by up to now, rice still considered as superior goods for carbohydrate (Sumodiningrat, 2001). Therefore, a determination to regain rice self sufficiency ever achieved in 1984 should be strived.

There are several factor to successful of self-sufficiency, including: a) increasing farm productivity through improved farming technology, and b) the development of infrastructure such as irrigation, extension services and so Irawan *et al.*, (2000). Various technological development of rice farming has generated and will continue to be found or assembled adjusting the conditions of the development of agro-ecosystem and socioeconomic conditions. The aim is that rice farming to be efficient and profitable for farmers.

Cropping system was one of technology to improve productivity and efficiensi. Based on the data of Badan Pusat Statistik Sumatra Sumatera Selatan (2009) that, the productivity of paddy on

the irrigated land in Musi Rawas was 4.70 tons per hectare. It was mean that the productivity was higher compared others regions in the province of South Sumatra, which ranges from 4.37-6.25 tons per hectare.

Increased crop productivity is expected to increase farmers' income. Rice planting system is introduced to improve the productivity and efficiency of paddy rice farming. Jajar Legowo planting systems is one of planting systems that adopted by the farmer (Ali and Syafrudin, 2005). How Jajar Legowo planting system can be improving the productivity of rice farming?.

Sustainable productivity improvement requires appropriate production management. Therefore, management of production must be consider the principle of optimization in order to achieve high production efficiently and effectively.

As entrepreneurs, farmer should act rationally and logically in the management

of farming. All constraints should be overcome to obtain the maximum profit. However, because of economic and knowledge constraint, then it cant be adopted properly. Therefore, this study will examine the factors that affect the production and benefit of the the rice farming planting system.

METHOD

This research was conducted in the District of Purwodadi Musi Rawas South Sumatra Province, represented by two farmer group in Purwodadi vilage; and two farmer group in Rejosari vilage.

Survey method was used in this research. As many as 58 household of 114 farmer were selected by using disproportionate stratified random sampling (table 1).

Data collection were done in August and September 2015 by using a questionnaire to investigate the respondents.

Table 1. Number of Sample

No	Planting Systems	Vilage	Farmer Group	Population	Farmer Sample	%
1.	Jajar Legowo System	P2 (Purwodadi)	Wulandari	29	15	50
		R (Rejosari)	Harapan	30	15	50
		Sub total		59	30	
2.	Sistem Tegel	P2 (Purwodadi)	Tani Subur	34	17	50
		R (Rejosari)	Sadar Bakti	21	11	50
		Sub Total		55	28	
Total				114	58	

Data Analysis

Data analysis was done by Cobb-Douglas Regression Model. it was used to seek the determinant factors that influences the production and the benefit. Formulation of the model can be written as follows:

$$\ln Y = a + \alpha_1 \ln B + \alpha_2 \ln L + \alpha_3 \ln U + \alpha_4 \ln S + \alpha_5 \ln P + \alpha_6 \ln T$$

Where:

Y = the production of paddy rice (kg/ha/planting season)
 B = number of seeds (kg/ha/planting season)

L = harvested area (ha/ lanting season)
 U = urea (kg/ha/plantingseason)
 S = SP-18 fertilizer (kg/ha/planting season)
 P = pesticides (ml/ha/planting season)
 T = labor (person work per day/ha/planting season)

The comparison between the value of the marginal product of input prices, with the following formula was used to determined using production factor efficiently:

$$NPMXi = \beta_i (Y/X_i) P_y = PX_i$$

Where :

β_i = elasticity to production-y

- Y = average amount of rice production
 X_i = average amount of usage of production factors to-i
 P_y = average production price
 PXI = price average production factors with assessment criteria:
 $NPMX_i / PXI = 1$ means the efficient use of production factors
1. $NPMX / PXI > 1$ means that the factors of production have not been efficient so it needs to be supplemented
 2. $NPMX / PXI < 1$ means that the factors of production used inefficient that needs to be reduced

RESULT AND DISCUSSION

Factors Affecting Rice Production in Jajar Legowo Planting System

The results of the model estimation on technical irrigation rice farming produces the coefficient of determination (R^2) which is as high as 0.995 means that 99.5 percent of the variation dependent variable that rice production can be explained by the independent variable is the number of seeds, harvested area, Urea, SP 36 fertilizer, pesticides, labor, while the remaining 0.5 percent are caused by other variables not examined.

Table 2. Regression Analysis of Factors Affecting Rice Production in Jajar Legowo Planting Systems

No	Variable	Coefficient	Standard error	t-test
1.	Number of Seeds	0,009	0,067	0,135
2.	Harvested Area	0,752	0,108	6,977
3.	Urea Fertilizer	0,165	0,052	3,146
4.	SP36 Fertilizer	-0,030	0,064	-0,476
5.	Pesticides	0,028	0,035	0,791
6.	Labour	0,112	0,069	1,630
	Constanta	6,850	0,485	14,139
		$R^2 = 0,995$	$F = 708,253$	

Statistical test t (Table 2) show that partially, the harvested area, Urea, and labor effected to production significantly, while the seeds, SP-36 fertilizer, and pesticides are not significant. In the Cobb-Douglas regression model, the coefficient of elasticity of the harvested area is 0,752, it means that if the area harvested increased 10 percent, rice production will increased 7,52 percent, and vice versa if the harvested area is reduced 10 percent, the production will decline to 7,52 percent.

Not same as with harvested area, urea fertilizer and labor affect not significant to rice production positivly. it means that each additional factors of production harvested area, urea fertilizer and labor tend to increase production.

subsequently the number of seeds, fertilizers SP-36 and pesticide effect negatively It means addition seeds, fertilizers and pesticides SP 36 tend to reduce the production of rice. Thus the use of seeds, fertilizers SP 36, and pesticide needs to be reduced. specifically for use SP 36 fertilizer, fertilizer use has

previously been left phosphates that are not absorbed by the plant, due to unfavorable soil conditions. Therefore, administration efforts are needed to improve soil physical and chemical properties.

Factors Affecting Rice Production with Tegel Planting System

Determination koeficient (R^2) in tile system is 0.995. it means that 99.5 percent of the variation dependent can be explained by the independent variable, consisting of the urea fertilizer, SP36 fertilizer, and pesticides, while the remaining 0.5 percent are caused by other variables excluded the model.

Statistical test (Table 3) can be shown that partially harvested area, manpower and number of seeds have a significant effect whereas urea, SP-36 fertilizer, and pesticides are not a significant effect. In the Cobb-Douglas production function is a regression coefficient of elasticity of each factor of production on yield. Results of regression coefficient estimates harvested area was

0,470, this means that if the area harvested increased 10 percent, rice production increased by 4.7 percent, and vice versa if the harvested area was reduced 10 percent, the production will decline 4.7 percent

Fertilizer given is not significantly different on rice production with tile system, meaning that the addition or subtraction of fertilizer had no effect, but this does not mean that plants do not require additional nutrients for growth. Fertilizers used by farmers in each planting season consists of the type of Urea and SP-36 with each dose of 188.3 kg / ha and 121.4 kg / ha. Not influential Urea fertilizer to rice production is suspected by the nature of Urea is

biodegradable either by evaporation or washing and urea fertilizer provided is still less than the recommended dosage of 200 kg / ha. Similarly, SP-36 fertilizer amount above the recommended dosage, where the recommended dosage is 100 kg / ha. Not influential fertilizer SP 36 against suspected rice production because the land has been saturated element P this can be seen from many years has been the land given P fertilizer every cropping season, where it is known that the properties of P fertilizer that slowly decomposes. This is in line with the opinion of Suwalan *et al.*, (2004) that the response of plants to fertilizer would increase if the right type of fertilizer used, dose, time and route of administration.

Table 3. Regression Analysis of Factors Affecting Rice Production in Legowo Row Cropping Systems

No	Variable	Regression coefficient	Standard error	t-test
1.	The number of seeds	-0,162	0,084	-1,938
2.	The harvested area	0,470	0,105	4,467
3.	Urea Fertilizer	-0,023	0,054	-0,424
4.	SP36 Fertilizer	0,014	0,043	0,303
5.	Pesticides	-0,039	0,042	-0,918
6.	Labor	0,774	0,118	6,559
	Constanta	5,188	0,515	10,075
R ² = 0,995		F = 765,459		

Rice with System Efficiency the Jajar Legowo Planting System

To determine the extent to which farmers are able to achieve the maximum benefit would be determined how farmers are able to optimize the use of production factors in the production process. Analysis of the efficiency of the use of factors of production using the arithmetic mean value (arithmetic mean). The results of the analysis of the efficiency of the use of factors of production of rice by calculating the marginal value of certain production factors (NPMx), the index of efficiency and test efficiency can be seen in Table 4.

Table 4 shows that the use of seeds, fertilizers and pesticides as well as the SP 36 workers have reached efficiently. This is reflected in the results of the test t value smaller than t table. Area harvested and urea fertilizer use needs to be added this is because the vast Harvest used the average farmer research area is still relatively low at 0.6 hectares while urea fertilizer 197.8 kg / ha should be increased because the number is still below the recommended dosage of 200 kg / ha to achieve efficient. While the labor force minus the amount necessary so as to reduce the allocation of labor costs, the farmers' income will be increased.

Table 4. Efficiency Test Uses Price Production Factors on Rice with legowo

Production Factor	The Price of Production Faktor *) (Px)	Marginal Production Value (NPMx)	Efficiency Index (k) (NPMx/Px)	(t hit)	Determination
1. Seed	7.700	6028.3	0.783	-0.04	Thit< Ttabel
2. Harvest Area	2000000	32219853.6	16.110	6.53	Thit> Ttabel
3. Urea Fertilizer	2356,6	21444.4	9.099	2.82	Thit> Ttabel
4. SP36 Fertilizer	2586,6	-7227.9	-2.794	-0.64	Thit< Ttabel
5. Pesticide	98.957	292603.8	2.957	0.53	Thit< Ttabel
6. Labor	69.166,67	28832.6	0.417	-2.27	Thit> Ttabel

T tabel = $t_{(0,025, 23)} = 2,069$

Rice with System Efficiency Tegel

To determine the extent to which farmers are able to achieve the maximum benefit would be determined how farmers are able to optimize the use of production factors in the production process. Analysis of the efficiency of the use of factors of

production using the arithmetic mean value (arithmetic mean). The results of the analysis of the efficiency of the use of factors of production of rice by calculating the marginal value of certain production factors (NPMx), the index of efficiency and test efficiency can be seen in Table 5.

Table 5. Test Usage Efficiency Price Production Factors on Rice with System Tegel in Purwodadi district, 2014

Production Factor	The Price of Production Faktor *) (Px)	Marginal Product Value (NPMx)	Efficiency Index (k) (NPMx/Px)	(t hit)	Determination
1. Seed	7,571.4	94649.7	12.501	2.10	Thit> Ttable
2. Harvest Area	2,000,000.0	13251258.3	6.626	11.72	Thit> Ttable
3. Urea Fertilizer	2,378.6	2686.2	1.129	0.08	Thit< Ttable
4. SP36 Fertilizer	2,589.3	2536.1	0.979	-0.01	Thit< Ttable
5. Pesticide	84,488.7	400778.8	4.744	0.91	Thit< Ttable
6. Labor	69,642.9	189484.4	2.721	-2.94	Thit> Ttable

T table = $t_{(0,025, 21)} = 2,080$

Table 5 shows that the use of urea, SP 36 fertilizer and pesticides has reached efficiently. This is reflected in the results of the test t value smaller than t table. Seed, harvested area and power usage needs to be added.

CONCLUSION

Factors that significantly influence the production of rice production Jajar Legowo planting systems was harvested area, urea fertilizer and labor while the seeds, SP-36 fertilizer, and pesticides affects not significant. Pada planting system Tegel production factors that have a significant effect is the seed, harvested area and labor while urea, SP-36 fertilizer and pesticides affect not significans.

On Jajar Legowo planting system use yet efficient production factor is harvested area and urea and inefficient is labor, while another factor is the seed, SP-36 fertilizer, and pesticides have been streamlined. Production Factors that its use has not been efficient in rice farming system with tiles is the seeds, harvested area and labor while the factors of production of urea, SP-36 fertilizer and pesticide use is already efficient.

REFERENCES

- Ali, I., and Syaffrudin. 2005. Kajian pengembangan usahatani padi dengan cara tanam jajar legowo 2:1. *Prosiding Seminar Nasional Pengembangan Inovasi Lahan Marjinal*.

- Badan Pusat Statistik. 2009. *Sumatera Selatan dalam angka. Propinsi Sumatera Selatan*. Palembang.
- Balai Pengkajian Teknologi Pertanian. 1992. *Lima tahun penelitian dan pengembangan pertanian. gaya teknik offset*. Bogor.
- Irawan, B., F Supena., S. Ade, S. A. Iwan, A. K. Nainy, R. Bambang, and W Budy 2000. Laporan Hasil Penelitian. Perumusan model kelembagaan reservasi lahan pertanian. Pusat Penelitian Sosial Ekonomi Pertanian. Badan Litbang Pertanian. Bogor.
- Somodiningrat, G. 2001. *Menuju Swasembada Pangan Revolusi Hijau*. Jakarta: RBI.
- Suwalan, S., Nana S., Bambang S., R. Kusmawa, and Didi Ardi. 2004. *Penggunaan pupuk alternatif pada tanaman padi sawah di Kabupaten Garut, Jawa Barat*. Kebijakan Perberasan dan Inovasi Teknologi Padi. Puslitbang Tanaman Pangan, Bogor.
- Suyamto. 2007. *Teknologi unggulan tanaman pangan*. Badan Penelitian dan Pengembangan Teknologi. Bogor.

DISCUSSION FROM PARALLEL SESSION

PAPER TITLE	Factors Affecting The Production and Benefit on The Planting System of Jajar Legowo and Tegel in The District Musi Rawas
AUTHOR	Nila Suryanti
DISCUSSION	
QUESTION	<ul style="list-style-type: none"> - Why Table 2 and 3 have the same title? - ... - What is your recommendation based on your study?
ANSWER	<ul style="list-style-type: none"> - It should be different title - ... - Planting System of Jajar Legowo is better than Tegel
SUGGESTION	<ul style="list-style-type: none"> - Table 2 sign of significant - Table 2 and 3 must be different title - ...



Agribusiness Development
for Human Welfare

2016

“Small and Medium-sized
Enterprises Competitiveness”



SECRETARIAT OFFICE

F3 Ground Floor, Agribusiness Department,
Universitas Muhammadiyah Yogyakarta
Jalan Lingkar Selatan Tamantirto,
Bantul. D.I.Yogyakarta 55183
Phone +62274 387656 (Ext 201)
Fax +62274 387646

ISBN 978-602-7577-70-1



9 786027 577701