PROCEEDINGS

CAPACITY EMPOWERMENT OF LOCAL RESOURCES BASED ON HALAL CERTIFICATION FOR GLOBAL MARKET

September 25 - 26, 2018
Bogor City, Indonesia

The 2nd BICAS 2018
THE SECOND BOGOR INTERNATIONAL CONFERENCE FOR APPLIED SCIENCE

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"CAPACITY EMPOWERMENT OF LOCAL RESOURCES BASED ON HALAL CERTIFICATION FOR GLOBAL MARKET"

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Welcome Speech

Dear ladies and gentlemen,

It is with the deepest of my gratitude, I would like to welcome you all in our conference. This is verily a precious moment to see academicians and researches with their great beautifully written papers come from all over the world. I would like to convey my greatest thank to respectable speakers, His Excellency Dr. Osamh Mohammed Al-Shuibi, Dr. Marco Tieman, Prof. Winai Dahlan, Tain Tsair Hsu, Dr. Ir. Lukmanul Hakim, M.Si., Asst. Prof. Dr. Ismail Lutfi Japakiya for joining our conference. Another thanks should also be given to our distinguished guests, colleagues, and all participants for having supported us through such kind of good attention and cooperation.

The 2nd Bogor International Conference on Applied Sciences (BICAS) is the joining event which was being held annually. Our joined hosts are Universitas Islam 45 Bekasi (UNISMA) and Ibn Khaldun University (UIKA), Fatoni University, The Assessment Institute for Foods, Drugs, and Cosmetics Indonesian Council of Ulama (LPPOM MUI) and BTN Syariah who have supported us with such a very kind commitment. The conferences are hope to serve as a forum to exchange ideas and experiences on findings and thoughts presented in empirical and theoretical assessments among Indonesian and overseas academicians and researches in halal science, agriculture, animal sciences, botanical sciences, food sciences, soil and environment sciences, biological sciences and biotechnology. Djuanda University (UNIDA) as further education institution has played its role in educating people; since 1987 it has graduated more than 10.000 graduates. At the moment, UNIDA has gained a prestigious rank from the Ministry of Research and Technology, which is in 66 level of the 100 best universities in Indonesia. This serves as an evidence that UNIDA has and will continue to find ways to develop and inform sciences to the general public.

Thanks are also deserved for the committee members and editorial boards for their tirelessly contributions to this conference. Finally, we welcome you all to Bogor, Indonesia. We hope that you will have a good time seeing the city of the rain.

Dr. Rita Rahmawati
Chairman of BICAS 2018

Content

General Information for Participants

- **Registration**

The registration desk will be located at HOTEL ONIH Jl. Paledang No. 52 Bogor 16720 Bogor, West Java, Indonesia

1. Location: Hotel Onih Bogor, Grand Ballroom, Main Lobby 1st Floor, Bogor-Indonesia
2. Open hours: 07:30-08:30 Tuesday, September 25, 2018
   07:30-08:30 Wednesday, September 26, 2018

- **Organizer**

Djuanda University, Bogor
Bogor, Indonesia
Tel: +62 251 8240 773, Fax: +62 251 8240 985
Web: http:\\unida.ac.id

- **Join Host**

- **Sponshorship**

- **Supported by:**

- **A Polite Request to All Participants**

Participants are requested to arrive in a timely fashion for all addresses, whether their own, or to those of other presenters. Presenters are reminded that the time slots should be divided fairly and equally between the number of presentations, and that they should not over run. The session chair is asked to assume this timekeeping role and to summarize key issues in each topic.

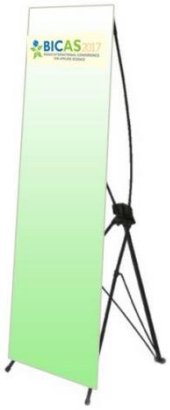
- **Preparation for Oral Presentations**

All presentation rooms are equipped with a screen, a LCD projector, and a laptop computer installed with Microsoft Office Power Point. You will be able to insert your USB flash drive into the computer and double check your file in Power Point software. We recommend you to bring two copies of the file in case that one fails.

- **Preparation for Poster Presentations**

Material Provided by the Conference Organizer:
1. X-frame display & base fabric canvases (60*160 cm)
2. Adhesive tapes or binder clips.

Material Provided by the Presenters:
1. Home-made poster(s).
2. Material: not-limited, can be posted on the canvases
3. Recommended poster size: 60*160 cm



Sample:

160 cm

60 cm

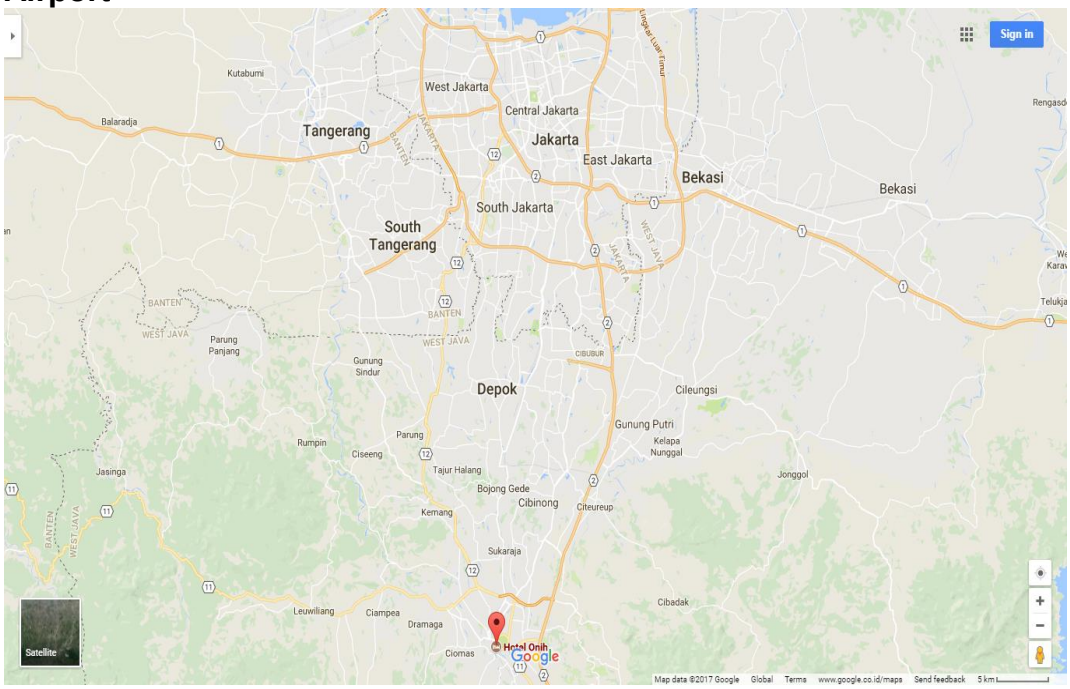
Conference Venue Information

Hotel Onih

Address:
JalanPaledang No. 50 - 52, Paledang, Bogor Tengah, Kota Bogor, Jawa Barat 16122

Phone: (0251) 8315008

Airport



Conference Schedule

TUESDAY, SEPTEMBER 25, 2018		
Time	**Schedule**	**Venue**
07.30 – 08.00	Registration and Coffee Morning	
08.00 – 08.30	Opening Session : Opening by MC National Anthem "Indonesia Raya" Djuanda University Hymne Welcome Speech and opening ceremony held by Rector of Djuanda University Praying	Ballroom
08.30 – 11.45	Keynote Speech Session : 1. Prof. Dr. Ocky Karna Radjasa: The Partnership and Mutual Linkages Among Various Parties; Contribution to the Community Empowerment 2. Dr. Daniel Ruiz de Garibay: Rejuvenating Agriculture: Keeping Young Farmers in the Field 3. Ass. Prof. Dr. Novel Lyndon: The Role of Customary Land in the Well-Being of Rural Native 4. Dr. H. Martin Roestamy, SH, MH: Contradictio In-terminis on Legal Culture Assimilation Between BOPUNCUR Communities and Middle East Tourists 5. Ass. Prof. Dr. Lubna Zaheer: Capacity Empowerment, Mass Media and Women in Pakistan 6. Dr. Ari Koski: Developing Maternity and Child Care System Pilot Project in Indonesia Moderator : Dr. Arya Hadi Dharmawan	Ballroom
11.45 – 13.00	Lunch break	
13.00 – 15.30	Concurrent Session BICSS **Education 1 (11)**	Ballroom Corner 1

Time	Schedule	Venue
13.00 – 15.30	Concurrent Session BICSS **Law 1 (11)**	Ballroom Corner 2
	Journal Corner	Ballroom Corner 3
	Concurrent Session BICSS **Administration (13)**	Meeting Room 6, Floor 1
	Concurrent Session BICAS **Agriculture (8)**	Meeting Room 4, Floor 1
	Coaching Clinict for Scitepress Proceeding Indexed Scopus	Meeting Room Mezzanine Floor 1,5
15.30 - 15.45	Coffee Break	
15.45 - 17.00	Concurrent Session BICSS **Banking (1)** **Business and Business Sharia (6)**	Ballroom Corner 1
	Concurrent Session BICSS **Society 1 (8)**	Ballroom Corner 2
	Journal Corner	Ballroom Corner 3
	Concurrent Session BICSS **Economics 1 (8)**	Meeting Room 6, Floor 1
	Concurrent Session BICAS **Animal Sciences (7)**	Meeting Room 4, Floor 1
	Concurrent Session BICSS **Management 1 (7)**	Meeting Room Mezzanine Floor 1,5
19.30 - 21.00	Galla Dinner for Invited Speaker	

WEDNESDAY, SEPTEMBER 26, 2018

Time	Schedule	Venue
07.30 - 08.00	Registration and coffee morning	
08.00 –11.45	1. His Exellency Dr. Osamh Mohammed Al-Shuibi: Halal Perspective on Islamic Rules and Toyyiban Aspects 2. Asst. Prof. Dr.Ismail Lutfi Japakiya: Halal -Haram According to the Quran and Sunnah 3. Dr. Ir. Lukmanul Hakim, M.Si : Halal Regulations in Indonesia 4. Tain Tsair Hsu : Why and how Taiwan could be a good partner for developing the Halal market? 5. Prof. Marco Tieman : Problems in halal supply chains in ASEAN Islamic Countries 6. Prof. Winai Dahlan: The Precision Halalization and Digitalization of Halal Materials and Products Moderator: H. Muhammad Agus Mulyana, MA	Ballroom
11.45– 13.00	Lunch break	
13.00 -15.30	Concurrent Session BICSS **Education 2 (10)**	Ballroom Corner 1
	Concurrent Session BICSS **Management 2 (10)**	Ballroom Corner 2
	Journal Corner	Ballroom Corner 3
	Concurrent Session BICSS **Society 2 (6)** **Politics (2)**	Meeting Room 6, Floor 1
	Concurrent Session BICAS **Food Sciences (10)**	Meeting Room 4, Floor 1
	Concurrent Session BICSS **Communication (11)**	Meeting Room Mezzanine Floor 1,5
15.30 - 15.45	Coffee Break	
15.45 – 17.00	Concurrent Session BICSS **Education 3 (8)**	Ballroom Corner 1
	Concurrent Session BICSS **law 2 (7)**	Ballroom Corner 2
	Concurrent Session BICSS **Economics 2 (8)**	Meeting Room 6, Floor 1

Time	Schedule	Venue
	Concurrent Session BICAS **Science and Technology (7)**	Meeting Room 4, Floor 1
	Concurrent Session BICAS **Soil and Environmental Sciences (3)** **Biological Sciences and Biotechnology (2)** **Halal Science (1)**	Meeting Room Mezzanine Floor 1,5
17.00 – 17.30	Awards to the Winner of the best paper & Closing	Ballroom

Wednesday, September 26, 2018, Ballroom
08.30 – 11.45

Session Chair: H. Muhammad Agus Mulyana, MA

[ABS-29]
Halal Perspective on Islamic Rules and Toyyiban Aspects
His Exellency Dr. Osamh Mohammed Al-Shuibi

[ABS-30]
Halal -Haram According to the Quran and Sunnah
Asst. Prof. Dr.Ismail Lutfi Japakiya

[ABS-31]
Halal Regulations in Indonesia
Dr. Ir. Lukmanul Hakim, M.Si

[ABS-23]
Why and how Taiwan could be a good partner for developing the Halal market?
Tain Tsair Hsu

[ABS-15]
Problems in halal supply chains in ASEAN Islamic Countries
Prof. Dr. Marco Tieman

[ABS-27]
The Precision Halalization and Digitalization of Halal Materials and Products
Prof. Dr. Winai Dahlan, Ph.D
Najwa Santiworakun,
Acharee Suksuwan,
Kasinee Katelakha,
Pornpimol Mahamad,
Paradorn Sureephong,
Kunthira Salae,
Nareeya Waloh

Keynote Speech

Ballroom
08.30 – 11.45, Wednesday, September 26, 2018

[ABS-29]
Halal Perspective on Islamic Rules and Toyyiban Aspects

Speech of His Excellency Dr. Osamh Mohammed Al-Shuibi at the Second International Conference

The Ambassador of The Kingdom of Saudi Arabia

Excellencies...Our honorable attendance…

Peace and mercy of God be upon you.

It is from God to us the grace of Islam, which is the approach developed by God Almighty to be upright by people and their lives are based on a clear and explicit approach, as Islam is built on several platforms and foundations are not neutral and called the pillars of Islam.

It is Islamic legislation that there are explicit and unambiguous constants, whether halal or haram, and we mention the slaughter of halal and what is permissible for the Muslim and eat it and the haraam whether it was slaughtered in a non-Islamic way or was from the forbidden dead. What is the family of other than God ... What is slaughtered to other than God ... Sniffer, etc.

As for what is mentioned in the Holy Quran from clear and explicit verses and texts, the first is mentioned in Surat al-Baqarah, verse (173). He said: "But if you are dead, the blood, the pork, and the meat that are given to him other than Allah are forbidden to you, then whoever is forced to do something wrong and do not return, there is no sin on him. Allah is Forgiving, Most Merciful." It is also mentioned in Surat al-An'am, verse 118, (Eat all that is mentioned in the name of Allah that you were the signs of believers) and clear and explicit verses on the prohibition of eating unless the name of God is mentioned in the verse of Anam (121) said: (And do not eat anything that does not mention the name of God on it and it is false and that the demons are waving to or to their allegiance to argue with you and that you obey them that you are involved).

Man has been at the center of the legislation, where Islamic law has focused its psychological balance on the three aspects of the spiritual, the material and the mental, and finding a balance between them is satisfying the spiritual side through worship, satisfying the material aspect by satisfying the earthly needs of man, food and drink. As for the mental aspect, it is satisfied by science. In this approach, the Lord has granted Islam to man what he achieves in his interest, which will not be realized unless man realizes what is related to halal and haram.

Islam came with the laws of halal and haram in order to preserve the balance between these aspects so as not to overwhelm one side of the other ..... If it was limited to science and the

material side would have been those societies that have made strides in science suit happiness with them directly ... But the reality lies. .. The reason for this is due to the fact that these societies have been forbidden and forbidden to halal on the scale of the curriculum which it considers valid and there is a huge difference between the comprehensive approach of God and the approach of human beings minor.

Despite the interest of Islam in medicine, there is an explanation of the relationship between the Holy Qur'an and applied science ... The Holy Qur'an is not a book in medicine or astronomy as some of his enemies try to find a difference in these sciences ...The material of the Holy Qur'an is greater than that partial information ... The sphere of the work of the Holy Qur'an is the same person, his beliefs, feelings, behavior, actions, and relationships with his Creator and around him, thus correcting his concepts and perceptions of life and putting him on the right path to use his energies, including his mental energy to do scientific research within the limits available to man It also addresses the building of the human society, which allows this person to improve the use of his energies in the goodness that pleases God.

As for the medical aspect of Islam, in the advanced research on alcohol-containing medicines and the deliberations that took place around them, and based on the sharia included in lifting the embarrassment, pushing hardship, paying the damage as much as possible, and necessitating forbidden prohibitions and committing the lesser necessities to prevent them, It is permissible to use pure alcohol as a remedy in any case, because the Messenger of Allah (peace and blessings of Allah be upon him) said: "Allah has not made your healing in what is forbidden to you." Narrated by al-Bukhari in Saheeh. And to say: (God is to take down the disease and make every disease medicine, then seek treatment, and do not seek treatment with something which is Haram) Narrated by Abu Dawood in Sunan, Ibn Sina, and Abu Naim. He said to Tariq ibn Suwayd, when he asked about wine, he made it in medicine (that is not healing, but it is a disease). Narrated by Ibn Majah in Sunnah and Abu Naim. Alcohol-containing medicines may be used as a consumable rate required by the pharmaceutical industry, which is irreplaceable provided that the doctor prescribed them fairly. Alcohol may also be used externally for wounds, germs, creams and external fats.

The Islamic Jurisprudence Society recommends that pharmaceutical manufacturers and pharmacists in Muslim countries and drug importers should work to exclude alcohol from drugs and use other alternatives. The Islamic Jurisprudence Society also recommends that doctors stay away from prescribing alcohol-containing drugs as much as possible. God grants success. And God bless our Prophet Muhammad.

كلمة سعادة السفير/ أسامة بن محمد الشعيبي في المؤتمر الدولي الثاني في بوغور للعلوم التطبيقية 2018م

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أصحاب السعادة .... حضورنا الكريم

السلام عليكم ورحمة الله وبركاته:ـ

لقد من الله علينا بنعمة الإسلام وهو المنهج الذي وضعه الله سبحانه وتعالى لكي يستقيم عليه الناس وتكون حياتهم مبنية على منهج واضح وصريح، حيث أن الإسلام بُني على عدة مناهج وأسس ثابتة لا حياد عنها ويطلق عليها أركان الإسلام.

ومن التشريعات الإسلامية أن هناك ثوابت صريحة لا حياد عنها سواء كانت حلال أم حرام، ونذكر منها الذبح الحلال وما يجوز للمسلم واكله والمحرم سواء كان ذبح بطريقة غير إسلامية أو كان من الميتة المحرمة، ويأتي من ضمن المحرم على المسلم أكله لحم الخنزير. ما آهل لغير الله... ما ذبح لغير الله.... المنخنقة ... إلخ

وأما ما ذكر في القرآن الكريم من آيات ونصوص واضحة وصريحة فيأتي في أولها ما ذكر في سورة البقرة آية (173) قال تعالي:

(انما حرم عليكم الميتة والدم ولحم الخنزير وما أهل به لغير الله فمن اضطر غير باغ ولا عادٍ فلا اثم عليه إن الله غفورٌ رحيمٍ).

وأيضاً ذكر في سورة الأنعام آية (118) قال تعالى:

(فكلوا مما ذكر اسم الله عليه أن كنتم بآياته مؤمنين) ومن الآيات الواضحة والصريحة على تحريم أكل مالم يذكر اسم الله عليه ما جاء في سورة الأنعام آية (121) قال تعالى:

(ولا تأكلوا مما لم يذكر اسم الله عليه وإنه لفسق وأن الشياطين ليوحون إلى أو ليائهم ليجادلوكم وان اطعتموهم أنكم لمشركون).

قد كان الإنسان هو محور التشريع حيث اهتمت الشريعة الإسلامية بتوازنه النفسي برعاية جوانبه الثلاثة الروحي المادي العقلي، وإيجاد التوازن بينها فيكون اشباع الجانب الروحي عن طريق العبادات، واشباع الجانب المادي عن طريق اشباع حاجات الإنسان الدنيوية، من مأكل ومشرب ومسكن....

أما الجانب العقلي فيكون اشباعه عن طريق العلم.. وبهذا المنهج الرباني قنن الإسلام للإنسان ما يحقق به مصلحته وهي مصلحة لن تتحقق ما لم يدرك الإنسان ما يتصل بالحلال والحرام... حتى يقيم توازنه النفسي على أسس سليمة...

جاء الإسلام بتشريع الحلال والحرام بهدف حفظ التوازن بين هذه الجوانب حتى لا يطغى جانب على آخر..... فلو كان الاقتصار على العلم والجانب المادي لكانت تلك المجتمعات التي قطعت أشواطاً من العلم تناسب معها السعادة طردياً... إلا أن الواقع يكذب ذلك... سبب ذلك يعود إلى أن تلك المجتمعات احلت حراماً وحرمت حلالاً بمقياس منهجها الذي تراه صالحاً وهناك فرق شاسع بين منهج الله الشامل ومنهج البشر القاصر...

وبالرغم من اهتمام الإسلام بالطب فإن هناك توضيحاً للعلاقة بين القرآن والعلوم التطبيقية... إن القرآن ليس كتاباً في الطب أو الفلك كما يحاول بعض أعدائه أن يجدوا فيه تبايناً مع هذه العلوم...

إن مادة القرآن أكبر من تلك المعلومات الجزئية... فمجال عمل القرآن هو الإنسان ذاته،، اعتقاده ومشاعره وسلوكه وأعماله وعلاقاته بخالقه وبما حوله وبذلك يصحح له مفاهيمه وتصوراته عن الحياة ويضعه على الطريق السليم ليستخدم طاقاته ومنها طاقته العقلية لتعمل بالبحث العلمي في الحدود المتاحة للإنسان كما يعالج بناء المجتمع الإنساني الذي يسمح لهذا الإنسان بأن يحسن استخدام طاقاته في الخير بما يرضاه الله.

وأما من الجانب الطبي في الإسلام ففي الأبحاث المتقدمة عن الأدوية المشتملة على الكحول والمداولات التي جرت حولها، وبناء على ما اشتملت عليه الشريعة من رفع الحرج، ودفع المشقة، ودفع الضرر بقدر الإمكان، وأن الضرورات تبيح المحظورات، وارتكاب أخف الضررين لدرء أعلاهما، فإنه لا يجوز استعمال الخمرة الصرفة دواءً بحال من الأحوال، لقول رسول الله صلى الله عليه وسلم : (إن الله لم يجعل شفاؤكم فيما حرم عليكم) رواه البخاري في الصحيح. ولقوله: (إن الله أنزال الداء وجعل لكل داء دواء، فتدوَوا، ولا تتداووا بحرامٍ) رواه أبو داود في السنن، وابن السني وأبو نعيم.

وقال لطارق بن سويد ـ لما سأله عن الخمر ُيجعلُ في الدواء (إن ذلك ليس بشفاءٍ، ولكنه داءٌ) رواه ابن ماجه في سننه، وأبو نعيم.

يجوز استعمال الأدوية المشتملة على الكحول بنِسبٍ مستهلكة تقتضيها الصناعة الدوائية التي لا بديل عنها بشرط أن يصفها الطبيب بشكل عادل، كما يجوز استعمال الكحول مطهراً خارجياً للجروح، وقاتلاً للجراثيم وفي الكريمات والدهون الخارجية.

يوصى المجمع الفقهي الإسلامي شركات تصنيع الأدوية والصيادلة في الدول الإسلامية، ومستوردي الأدوية بأن يعملوا جهدهم في استبعاد الكحول من الأدوية، واستخدام غيرها من البدائل.

كما يوصي المجمع الفقهي الإسلامي الأطباء بالابتعاد عن وصف الأدوية المشتملة على الكحول ما أمكن. والله ولي التوفيق. وصلى الله على نبينا محمد....

Keynote Speech

Ballroom
08.30 – 11.45, Wednesday, September 26, 2018

[ABS-30]
Halal and Haram in light of the Book and Sunnah

Asst. Prof. Dr. Ismail Lutfi Japakiya

Fatoni University

Abstract

According to Islam religion that halal (permissible) is what Allah has permitted, and His Messenger and *haram* (forbidden) is what Allah has forbidden, and His Messenger and religion is the law of Allah and His Messenger. Therefore, what is *haram* is punishable by one who does it, and one who does not. Similarly, there is no sin in leaving him unless he intends to do it, and he is able to do it to obey Allah. The subject of halal and haram is one of the most important issues of Islam, which calls for understanding and permanent reflection; because of the entire orbit of religion, in its rules and purposes. *Halal* and *Haram*, is limited of God, test the slavery of slaves, a law to preserve their human dignity and achieve a good life for them; it is God to God, where the response and delivery, it is on the truth of faith and the path of victory and the peasant. It is obligatory to perform duties after the correct belief that the Muslim should agree in his religion in general and in the matters of halal and haraam in particular.

Keywords: *Halal*, *Haram*, Quran and Sunnah

Topic: Halal Science

الباب

الحلال والحرام في ضوء الكتاب والسّنة

الدكتور إسماعيل لطفي جافاكيا [1]

الجامعة فطاني

الملخص

"أَصْلُ الدِّيْن" أن الحَلاَلَ مَا أَحَلَّهُ اللهُ وَرَسُوْلُه، وَالحَرَامَ مَا حَرَّمَهُ اللهُ وَرَسُوْلُه ×، وَالدِّينُ مَا شَرَعَهُ اللهُ وَرَسُوْلُهُ؛ وَعَلَيْهِ فالحرام مَا يُعَاقَبُ فَاعِله وَيُثَابُ تَارِكه إذا امتثل في تَرْكِهِ نَهْيِ الله، وأمَّا الحَلاَلُ فَلاَ إِثْمَ فِي فِعْلِه كَمَا أَنَّهُ لاَ إِثْمَ فِي تَرْكِهِ إِلاَّ إِذَا قَصَدَ فِي فِعْلِهِ التَّقَوِّي بِهِ عَلَى طَاعَةِ اللهِ فَهُوَ مُثَابٌ بِهَذِهِ النِّيَّة.

وَمَوْضُوْعُ الحَلاَل وَالحَرَام: مِنْ أَهَمِّ قَضَايَا الإِسْلاَم الَّتِي تَدْعُو إِلَى التَّفَقُّهِ وَالتَّدَبُّرِ الدَّائِم؛ لأَنَّ عَلَيْهَا مَدَارَ الدِّيْنِ كُلِّه، فِيْ قَوَاعِدِهِ وَمَقَاصِدِهِ.

وَالحَلاَلُ وَالحَرَامُ، هُوَ حُدُوْدُ اللهِ، يَخْتَبِرُ فِيْهَا عُبُوْدِيَّة العِبَاد، بِشَرِيْعَةٍ لِصَوْنِ كَرَامَتِهِمْ الإِنْسَانِيَّةِ وَتَحْقِيْقِ الحَيَاةِ الطَّيِّبَةِ لَهُمْ؛ فَمَنْ دَانَ للهِ فِيْهَا بِالاِسْتِجَابَةِ وَالتَّسْلِيْمِ، فَهُوَ عَلَى حَقِيْقَةِ الإِيْمَانِ وَطَرِيْقِ الفَوْزِ وَالفَلاَح.

وَمِنْ أَوْجَبِ الوَاجِبَاتِ بَعْدَ العَقِيْدَةِ الصَّحِيْحَة، أَنْ يَتَفَقَّهَ المُسْلِمُ فِي دِيْنِهِ عَامَّةً وَفِي أُمُوْرِ الحَلاَلِ وَالحَرَامِ خَاصَّة، لِيَعْلَمَ القَوَاعِدَ وَالأَحْكَامَ وَالضَّوَابِطَ حَتَّى يَعْبُدَ اللهَ رَبَّهُ عَلَى عِلْمٍ وَيَقِيْنٍ وَبَصِيْرَةٍ، وَيَتَبَيَّنَ سَبِيْلَ طَاعَتِهِ وَابْتِغَاءَ مَرْضَاتِه، فَيَلْزَمَ حُدُوْدَه، وَيَعْتَدِلَ عَلَى صِرَاطِهِ المُسْتَقِيْم.

[1] أستاذ مشارك للدِّرَاسَاتِ العُلْيَا، رئيس جامعة فطاني، عضو المجلس الأعلى لرابطة العالم الإسلامي، رئيس مشترك لمجلس التعاون بين أتباع الدِّيانات للسَّلام في تايلاند

Keynote Speech

Ballroom
08.30 – 11.45, Wednesday, September 26, 2018

[ABS-31]
Halal Regulations in Indonesia
Dr. Ir. H. Lukmanul Hakim, M.Si

Director of LPPOM MUI/AIFDC ICU

Abstract

Recently, Halal products and services are known as rapid growth markets globally in many sectors such as food, clothing, investment, and insurance. There are many substantial opportunities in some sectors of halal global which total is around $1.9 Trilion (Tn) in 2015 and approximately will reach $3 Tn in 2021. But only a few sectors certified halal. For example, the amount muslim spend on food and beverage is $1.1 Billion (Bn) but only $415 Bn certified halal. Another example, muslim spend $151 Bn for outbound travel sectors but only $24 Bn certified halal (Reuters 2016/17). For muslim consumers halal is as a necessity, meanwhile for non-muslim halal represents hygiene, safety and high quality.

Indonesia is the most populated muslim country which about 227 million (Worldatlas 2018) and halal becomes a sensitive issue. Some issues can affect public anxiety and disrupted national economy. In the other hand, The State has the obligation to provide protection and assurance of every religion worship. In 2014 The State establishing Law Number 33 about Halal Product Assurance (JPH), that traded product in Indonesia must have an information obviously. Not only halal products consumed and used in Indonesia must be certified halal, but also for non-halal products must put the information on it. As a control function from violation of this Law, administrative and criminal sanctions are established. The Government established BPJPH to conduct the law, collaborate with MUI and related ministries or institutions. MUI has functions about halal certification which are: halal product determination by KF MUI, halal auditor certification by LSP LPPOM MUI, LPH accreditation, and international relations of cooperation.

Therefore, before the enactment of this Law, due to article 59 and 60, MUI still conduct its tasks and functions on implementing Indonesia halal policy. MUI has been maintaining halal regulation in Indonesia for 29 years and the halal standard has been recognized and adopted by 46 halal certification bodies from 23 countries. In order to support the halal services and assurance including traceability and authentication, LPPOM MUI obtained ISO 17025 certificate in the term of Laboratory and ISO 17065 certificate in the term of Halal Certification Body. MUI related to Halal Decision, consist of Fatwa Commission concerning on syariah judgement and LPPOM concerning on scientific judgement.

Key Words : Indonesia, Halal, MUI, Regulation, Market

Topic **:** Halal Science

Keynote Speech

Ballroom
08.30 – 11.45, Wednesday, September 26, 2018

[ABS-23]
Why and how Taiwan could be a good partner for developing the Halal market?

Tain Tsair Hsu

Chairman of CDRI, Taiwan

Abstract

Taiwan current condition and stage of economic development compared to ASEAN countries means that it can promote economic transformations in the Halal market through a complementary and cooperative development. With Taiwan experience in successful transition from an agricultural society to an industrial society, expertise in agricultural science and development, capital supply, strong IT foundation, sufficient supply of skilled high-tech talents, and Taiwan new southbound policy, along with Indonesia lower-cost labor and knowledge of the Halal market, Taiwan is in an unique position to work with Indonesia in building up a Halal-compliant food industry. We propose a set of strategies to efficiently utilize human capital, develop international Halal certification processes and standards, plan and assist in establishing organizations to promote the industry in the ASEAN countries, introduce and encourage investment in the food industry ecosystem and to utilize Taiwan science and technology expertise to establish a Halal industrial park. We will also provide a three-phase plan to upgrade the agricultural supply chain in Indonesia that includes (1) local revitalization, (2) introduction of agricultural e-commerce and (3) optimization of the ecosystem.

Keywords: Local Revitalization, Introduction of Agricultural E-Commerce, Optimization of The Ecosystem.

Topic: Halal Science

Keynote Speech

Ballroom
08.30 – 11.45, Wednesday, September 26, 2018

[ABS-15]
Problems in halal supply chains in ASEAN Islamic Countries

Prof. Dr. Marco Tieman

Professor ELM Graduate School, Help University (Malaysia)

Abstract

Halal is going through an evolution towards a halal supply chain and value chain. This requires halal to be organised end-to-end. Brand owner halal supply chains as well as halal certification body halal standards & auditing mechanisms are showing cracks in their current approach to halal that cannot cope with these emerging requirements. The result is that halal assurance systems are highly exposed for companies, where halal certified companies can easily lose their licence to operate. Professor Tieman will discuss the following questions: (1) What needs to be done by the halal industry to organise halal end-to-end? (2) What GAPs need to be solved in the halal supply chain for ASEAN Islamic Countries? (3) Can technology solve our halal supply chain problems? and (4) What is the role of the halal certification body in this transition?

Keywords: Halal Industry, Supply Chain, Halal Certification

Topic: Halal Science

Keynote Speech

Ballroom
08.30 – 11.45, Wednesday, September 26, 2018

[ABS-27]
The Precision Halalization and Digitalization of Halal Materials and Products

Prof. Dr. Winai Dahlan , Najwa Santiworakun, Acharee Suksuwan, Kasinee Katelakha, Pornpimol Mahamad, Paradorn Sureephong, Kunthira Salae, Nareeya Waloh,

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Abstract

The complexity of food nowadays makes the Halal status of food are uncertain for Muslim consumers. Some food ingredients which are not permissible in Islam might be unintentionally added by food producers. This circumstance makes Halal Certification and Halal Assurance become crucial. The Central Islamic Council of Thailand (CICOT), The Halal Standard Institute of Thailand (HSIT) and The Halal Science Center Chulalongkorn University (HSC) are working together to qualify the Thai Halal certified products to be high standard quality and trustworthy under the concept Religion Certifies, Halal Science Supports and National Strategy guideline Thailand Diamond Halal. The Precision Halalization system provides cost effective of Halal supply chain, Halal traceability, Halal safety and Halal assurance. This system includes Systematic Thai Halal Certification, Halal Forensic Science Laboratory Services, Halal Management System (HAL-Q), ID of Query Raw materials for Assuring Halalness (IQRAH) and the digitalization system called System Protocol for Halal Electronic Resource Exchange (SPHERE) which has recently initiated will facilitate the consumers and food producers to access the Halal Big Data more easily. By implementation of this system, Thailand can possibly achieve the goal to be not only kitchen to the world but Halal for all.

Keywords: Precision, Halalization, Halal Assurance, Digitalization

Topic: Halal Science

Agriculture (8)

Tuesday, September 25, 2018,
13.00 - 15.30

Meeting Room 4
Floor 1

Session Chair: Arti Yusdiarti

[ABS-7] Consumer Perceptions and Preferences Against Attributes of Commercial Vegetable Quality in Modern Market (Case Study Giant Ekstra Botani Square, Bogor City)
Arti Yusdiarti, Eki Padhal Irsyad, Himmatul Miftah

[ABS-32] Crystal Sugar Zingimori
Siti Cahya Wulan Alawiyah

[ABS-33] Vegetables Supply Chain Model in Bogor City Traditional Market for Farmers Benefits
Himatul Miftah, Arti Yuesdiarti,

[ABS-36] Growth, Productivity and Quality of Katuk (Sauropus Androgynus (L.) Merr.) on Various Combination of Cow Urine and Urea Fertilizer
Arifah Rahayu, Faizal Bahari, Wini Nahraeni, Nur Rochman

[ABS-37] Skerwool Inovation of Planting Media Hydroponic
Indah Ayu Lestari

[ABS-40] The Survival Rate of Giant Gouramy (Ospronemus Goramy) on Different Aquaculture Media (Biofloc) and Feed Proteins
Muarif

[ABS-45] Policy of Developing Institutional Partnership Supply Chain Chicken Business Broiler in Bogor Regency, West Java Province
Ita Novita and Nur Rochman

[ABS-46] Marketing of Basil (Ocimum Basilicum L.) Vegetables by S-C-P Approach at Kadudampit District Sukabumi Regency
Wini Nahraeni, Arifah Rahayu, Arti Yusdiarti, Iis Afriyanti Kulsum

[ABS-7]

Consumer Perceptions and Preferences Against Attributes of Commercial Vegetable Quality in Modern Market (case study Giant Ekstra Botani Square, Bogor City)

Arti Yusdiarti, Eki Padhal Irsyad, Himmatul Miftah

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(b) Faculty of Agriculture, Djuanda University, Bogor, Indonesia
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Abstract

Research aims to know consumer perceptions and preferences against attributes of commercial vegetables quality in modern market. Research methods is non-probability sampling. Research use descriptive analysis and Chi-Square test. Consumer perceptions: (1) Potatoes: clean enough, yellow meat color, small peel, medium size, skin light brown, eyes <5, lumps <3, oval. (2) Tomatoes: fresh, water content 20-35%, sourish, reddish green, rather soft, medium size, rather round. (3) Red onions: clean enough, diameter 2,5 cm, rather stinging, rather round, light purple and dark purple, enough smooth, clove 2-3. (4) Spinach: fresh, green, smooth enough, amount of leaf is medium, size medium, enough uniform, rather oval. While preferences: (1) Potatoes: very clean, without lumps, yellow meat color, sleeky smooth skin, have no eyes, medium size, light brown eyes, oval. (2) Tomatoes: very fresh, sweet, hard, red, size medium, water content 20-35%, oval. (3) Red onions: size 2,5 cm, sting, smooth, dark purple, have no cloves. (4) Spinach: fresh, green, smooth, lots of leaves, size medium, uniform, rather oval, have roots. Chi-Square test shows mostly attributes of quality is significantly different.

Keywords: Perceptions; Preferences; Chi-Square; Modern market

Topic: Agriculture

[ABS-32]
Crystal Sugar Zingimori

Siti Cahya Wulan Alawiyah

Djuanda University, Bogor, Indonesia

Abstract

Crystal Sugar Zingimori is functional drink that has benefits for millennial health and intelligence. Drink with herbal ingredients such as ginger, ginger containing oleoresin and essential oils, with the addition of antanan extract which functions to activate nerve cells to improve concentrations and memory. In addition, this product is also added with secang wood containing flavonoids and other phenolic compounds that have the potential to antioxidants. This secang wood is natural dye used in this product. Crystal Sugar Zingimori as a functional drink can be consumed by various groups from children to adults. With very high benefits Crystal Sugar Zingimori drink are sold at affordable price and easy to serve for consumption.

Keywords: Ginger, Antanan, Secang

Topic: Agriculture

[ABS-33]
Vegetables Supply Chain Model in Bogor City Traditional Market for farmers benefits

Himatul Miftah, Arti Yoesdiarti

Djuanda University, Bogor, Indonesia

Abstract

Farmers benefits are highly possible to be improved if vegetable selling prices at the consumer level are increase. The Increased of vegetable prices due to increasing demand is a result of increased population, income, increased awareness of healthy living and education levels. Allegedly the benefits obtained are not yet optimal in accordance to the efforts. Therefore, it is necessary to analyze the supply chain model that benefits farmers who sell vegetables to the traditional market in Bogor City. The research objective is to develop a supply chain model that benefits farmers. Data collection method used are observation and interview with snowball sampling techniques at selected traditional market locations. Respondents interviewed consisted of farmers and intermediary traders to retailers in various types of supply chains. Data analysis uses the calculation of trading margin, farmer share, and payment cycle. Vegetables studied were Spinach, Tomato, Potatoes and Shallots. The results showed that supply chain activities include three activities, namely physically distributing vegetables, receiving and distributing ordering and distribution information and receiving payments. The recommended model for leaf vegetables is from direct retailer farmers. For tomatoes, from farmers directly to the central market to retailers. For potatoes, from farmers to village collectors continue to retailers. All models require integrated information systems and logistics systems facilitated by the government.

Keywords: Vegetables, Supply Chain, Traditional Market

Topic: Agriculture

[ABS-36]
Growth, Productivity and Quality of Katuk (Sauropus androgynus (L.) Merr.) on Various Combination of Cow Urine and Urea Fertilizer

Arifah Rahayu (a), Faizal Bahari (b), Wini Nahraeni (c), Nur Rochman (a)*

(a) Agrotechnology Department, Faculty of Agriculture, Djuanda University, Bogor, Indonesia
(b) Alumnus of Agrotechnology Department, Faculty of Agriculture, Djuanda University, Bogor, Indonesia
(c) Agribussiness Department, Faculty of Agriculture, Djuanda University, Bogor, Indonesia

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Abstract

Katuk (Sauropus androgynus (L.) Merr.) is a leafy vegetable that required N fertilizer to support the growth. The purpose this research was to determine cow urine and urea fertilizer effects on growth, productivity, and quality of several katuk plant accessions. The experiment design was a Completely Randomized Design Factorial with two factors, including accession (Cianjur, Sukabumi1, and Sukabumi2) and fertilizer combination (urine 100%, urine 75% + urea 25%, urine 50% + urea 50%, urine 25% + urea 75%, and urea 100%). The result of this research showed that growth and productivity of katuk plant from Cianjur acessions had best variables on number of shoots, total shoot length, number of leaves, fresh weight, and dry weight than the others two Sukabumi accessions. The use of urine 100%, urine 75% + urea 25%, and urine 50% + urea 50%, increased total fresh weight significantly until the third harvest compared with the use of urine 25% + urea 75% and urea 100%. Best katuk quality showed by Sukabumi2 accession that had highest vitamin C and chlorophyll content. Combination of cow urine and urea fertilizer treatment showed that no significantly difference of all vegetative variables except leaflet area. In katuk plants, cow urine can replace the use of urea fertilizer.

Keywords: Indigenous, Sauropus Androgynus, Fresh Weight, Vitamin C, Chlorophyll

Topic: Agriculture

[ABS-37]
Skerwool Inovation of Planting Media Hydroponic

Indah Ayu Lestari
Djuanda University, Bogor, Indonesia

Abstract

Skerwool is an innovation hydroponic planting media made from organic materials. This product can reduce the uses of rockwool which is imported from European. Skerwool comes as a substitute for rockwool, or seedling planting media with many advantages. The combination of pulp, cocopeat and husk charcoal as the materials of skerwool as a planting medium provides the benefits of paper pulp as a means of aggregating media components and is able to absorb water perfectly; cocopeat contributes to the nutrition of potassium and organic matter; Husk charcoal with high porosity is able to maintain the balance of aeration in the root zone and coconut water as growth stimulants. Skerwool raw materials come from waste that is easily available, thus reducing environmental problems, even increasing the value of waste into useful materials. The advantages of skerwool are lightweight, contain high nutrients of potassium and contain auxin as a stimulator to make plants grow faster. Absorption of nutrients is good, because the structure of porosity and capillarity of the media is good, good aeration and nutrient flow. Skerwool media is suitable for seed media and hydroponic planting media, because it is easy to cut and light, suitable for various types of plants.

Keywords: Skerwool, Hydroponic, Agriculture, Waste

Topic: Agriculture

[ABS-40]
The Survival Rate of Giant Gouramy (Ospronemus Goramy) on Different Aquaculture Media (Biofloc) and Feed Proteins

Muarif

Departement of Aquaculture Faculty of Fisheries, Djuanda University, Bogor, Indonesia

Abstract

The purpose of this study was to determine the survival rate of Giant Gouramy (Ospronemus goramy) that were maintained on different biofloc media and feed proteins. The Experimental design of the study was used completely randomized design with treatment A (biofloc C/N ratio 12 and feed protein 17%) and treatment B (non biofloc and feed protein 30%). The average survival rate of gourami in treatment A was 89%, while survival rate in treatment B is 40.00%. The analysis of variance showed that treatment A was significantly different from treatment B ($P < 0.05$). Water quality during the experimental research are suitable for fish life, they are temperature of 23.3-30.0 ^{o}C, pH of 6.4-8.8, and dissolved oxygen of 6.3-8.8 mgL-1.

Keywords: Biofloc; Survival Rate; Giant Gouramy

Topic: Agriculture

[ABS-45]
Policy of Developing Institutional Partnership Supply Chain Chicken Business Broiler in Bogor Regency, West Java Province

Ita Novita and Nur Rochman
Djuanda University, Bogor, Indonesia

Abstract

In order to improve the welfare of livestock, especially broiler breeders in Bogor district, hence a good arrangement is needed in supply chain partnership institutions. The aim of the researcher was to analyze the policy of developing partnership supply chain business institutions for broiler in Bogor Regency, West Java Province, namely: formulating the terms and conditions for developing effective and efficient broiler supply chain business institutions. The study includes the pattern of independent livestock farmers and partnerships. Descriptive qualitative data analysis method, descriptive description is useful to see the company's environmental conditions and the characteristics of farmers by classifying data, facts and information to formulate the potential, problems and real conditions of broiler breeders. As a result of the study, that the main requirement in the partnership supply chain business broiler business in Bogor regency is to optimize the existing market potential, thus breeders can access the market proportionally.

Keywords: Supply Chain, Broiler Breeders, Institutional Partnership

Topic: Agriculture

[ABS-46]
Marketing of Basil (Ocimum Basilicum L.) Vegetables by S-C-P Approach at Kadudampit District Sukabumi Regency

Wini Nahraeni, Arifah Rahayu, Arti Yusdiarti, Iis Afriyanti Kulsum
Agribussiness Department, Faculty of Agriculture, Djuanda University, Bogor, Indonesia

Abstract

The purpose of this research was to analyzes the structure, conduct, and performance of the basil market. Data were collected from May until June 2017 and analyzed descriptively and quantitatively by structure, conduct and performance approach (SCP). The research indicated that market structure at the farmers level is oligopsony, and at the intermediary trader level is oligopoly. The price determinant at the farmer level is done by the buyer. At the village, collector trader, the wholesaler, and the retailer level the selling price determinant is by seller himself. Payment systems is delay system payment. There are five marketing channels, I: Farmers and Consumers, II: Farmers and Retailers, III: Farmers and Middleman in village and Retailers, IV: Farmers and Wholesalers and Retailers, and V: Farmers and Wholesalers and Supermarket. The analysis of market performance showed that the lowest margin obtained by the second channel (IDR6,150.4), with farmer share value is 66 percent. The profit and cost ratio value of all marketing channels is more than zero. Based on the current conditions and the results of this analysis, the most efficient marketing channel is channel II, so it is can be an alternative for farmers to marketing basil. The role of farmer groups must be strengthened, to make it easier for farmers to gain access of information and market, in order to improve the bargaining position of farmers.

Keywords: Basil, Price Determinant, Marketing Channel, Oligopsony

Topic: Agriculture

Animal Sciences (7)

Tuesday, September 25, 2018,
15.45 - 17.00

Meeting Room 4
Floor 1

Session Chair: Dr. Dede Kardaya, M.Si.

[ABS-1] The Stomach Histopathology of Hard-Lipped Barb That Infected by Aeromonas Hydrophila
Mulyana and Fia Sri Mumpuni

[ABS-5] Hematological Profile of Pregnant Pasundan Cattle Flushed with Urea-Impregnated Zeolite Ration under Extensive Grazing
D. Kardaya, Elis Diansih, D. Sudrajat

[ABS-13] Performance, Percentage of Carcass Partion and Non Carcass of Local Male Ducks (Anas Plathyrinchos) Fed Torch Ginger Flower (Etlingera Elatior) Solution Included in Commercial Ration
Ristika Handarini, Elis Dihansih, Dewi Wahyuni

[ABS-17] Lesson Learned on Coral Reef Ecosystem Services Valuation Damage Due to Vessel Grounded in Indonesia
Yudi Wahyudin, Idris, Osten Sianipar, Pahlano Daud, Mahipal

[ABS-35] Interior Quality of Laying Egg Fed Ration Containing Fermented Non-Conventional Feeds
Deden Sudrajat, Hanafi Nur, Anggraeni, Fera Priyatna

[ABS-42] The Effect of Giving Fermented Non Conventional Feed to Chicken Egg Sensoris Quality
Anggraeni, Deden Sudrajat, Hanafi Nur, Mukhlisin

[ABS-43] Performance and Meat Quality of Local Ducks Fed Rations Containing Torch Ginger (Etlingera Elatior) Flowers and Betel (Piper Betle Lin) Leaves
Elis Dihansih, Ristika Handarini, Dewi Wahyuni, Burhanudin Malik

[ABS-1]
The Stomach Histopathology of Hard-Lipped Barb that Infected by Aeromonas Hydrophila

Mulyana and Fia Sri Mumpuni

The Fisheries Department, Agricultural Faculty, Djuanda University, Bogor, Indonesia

Abstract

The pathogenic bacterium species that the potentially can cause histopathology on hard-lipped barb is Aeromonas hydrophila. A. hydrophila infection can disrupt the digestive system of hard-lipped barb. The aim of this research is to know, determine and analyze the stomach histopathology and the development of stomach histopathology degree of hard-lipped barb that infected by A. hydrophila. This research uses the experimental design with 7 treatments and 2 replications. The treatments are Control (without A. hydrophila injection), A (with 104 cfu/mL injection), B (with 105 cfu/mL injection), C (with 106 cfu/mL injection), D (with 107 cfu/mL injection), E (with 108 cfu/mL injection) and F (with 109 cfu/mL injection). The results of research showed that the infected hard-lipped barb have the form of stomach histopathology namely necrosis. The greater of stomach histopathology degree at the greater of bacteria cells injection dose.

Keywords: Stomach, Histopathology, Necrosis, Hard-Lipped Barb

Topic: Animal Sciences

[ABS-5]

Hematological Profile of Pregnant Pasundan Cattle Flushed with Urea-Impregnated Zeolite Ration under Extensive Grazing

D. Kardaya (*), E. Diansih, D. Sudrajat

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(*) Corresponding Author: dede.kardaya@unida.ac.id

Abstract

A study on a four-year old of pregnant Pasundan cattle under extensive grazing has been conducted to reveal their hematological profiles. A completely randomized design with three treatments and five replications was applied. Each of five of total number of fifteen pregnant cows is allocated into three treatments as follow: 1) allowed to extensive grazing, 2) allowed to extensive grazing and fed flushing ration, 3) allowed to extensive grazing and fed urea-impregnated zeolite flushing ration. Blood samples were collected in EDTA-vacutainer and analyzed with Vet Scan HM5 automatic analyzer for the hematological profile. The hematological data were analyzed with anova and if applicable, Duncan multiple rank test. Feeding urea-impregnated zeolite flushing ration increased ($p< 0.05$) Red Blood Cell (RBC), Hemoglobin (Hb), red blood cell distribution width concentration (RDWC), Platelet count (PLT), and Platelet distribution width concentration (PDW). Feeding flushing ration decreased ($p< 0.05$) Mean Corpuscular Hemoglobin (MCH) and PLT. None of both flushing rations affected Mean Corpuscular Volume (MCV), Mean Corpuscular Hemoglobin Concentration (MCHC), Mean Platelet Volume (MPV), White Blood Cell (WBC), Lymphocyte, Monocyte, Neutrophil, and Eosinophil. In conclusion, both flushing rations improved hematological profile of a four-year old of pregnant Pasundan cattle under extensive grazing within normal hematological range.

Keywords: Urea-impregnated zeolite flushing ration, Hematocrit, Red Blood Cell, White Blood Cell, Pasundan cattle

Topic: Animal Sciences

[ABS-13]

Performance, Percentage of Carcass Partion and Non-Carcass of Local Male Ducks (Anas Plathyrinchos) Fed Torch Ginger Flower (Etlingera Elatior) Solution Included in Commercial Ration

Ristika Handarini, Elis Dihansih, Dewi Wahyuni

Djuanda University, Bogor, Indonesia

Abstract

This study aimed to examine the effects of torch ginger flower solution included in commercial ration on performance, percentage of carcass part and noncarcass of local duck. Twenty-four local male ducks aged 2 weeks with average initial body weight of 450 approximately 53.04 g were used. A completely randomized design with 4 treatments and 3 replicates was used. Treatments consisted of: commercial ration (R0), R0 plus 2.5 percent torch ginger flower solution (R1), R0 plus 5.0 percent torch ginger flower solution (R2), and R0 plus 7.5 percent torch ginger flower solution (R3). Data were subjected to Anova and Duncan test. The variables measured consisted: of production performance, carcass and non-carcass percentages. The results showed that no significant differences were found in production performance parameters. However, torch ginger flower solution had significant effect ($P<0.05$) on the percentage of thigh, but not for percentage of chest. The parameters of non-carcass showed no significant effect among treatments. It was concluded that torch ginger flower (Etlingera elatior) solution included in commercial ration was unable to improve the performance of male local ducks but the inclusion at rate 7.5 percent increase the percentage of thigh.

Keywords: Torch Ginger Flower Solution, Performance of Local Male Duck, Carcass Parts, Non-Carcass

Topic: Animal Sciences

[ABS-17]

Lesson Learned on Coral Reef Ecosystem Services Valuation Damage Due to Vessel Grounded in Indonesia

*Yudi Wahyudin (a, b *), Idris (c), Osten Sianipar (d), Pahlano Daud (e), and Mahipal (f)*

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Abstract

Vessel grounded on coral reef ecosystem still be one of the biggest damages by incident to corals ecosystem services. Many cases had been handled and a few of cases was already solved. The vessel and or insurance paid amounted value to the state as their willing to obligate the damages. This research paper is comparing all the case of vessel grounded during the year 2017 and first semester of 2018. This paper concluded the summary of all the works of experts on corals ecosystem; ecosystem services valuation, and national regulation. This research shows that there is a different claim among all the cases, due to the quality of corals, location and approaches. The value of coral ecosystem services consists of provisioning, regulating, cultural and supporting services and every meter squares of corals damage will loss around IDR 1 million. This value is still in minimum value and could be higher when the techniques and approaches to measure other ecosystem services could be developed.

Keywords: Coral Reef, Ecosystem Services, Economic Valuation, Vessel Grounded, Ecosystem Loss

Topic: Animal Sciences

[ABS-35]
Interior Quality of Laying Egg Fed Ration Containing Fermented Non-Conventional Feeds

Deden Sudrajat, Hanafi Nur, Anggraeni, Fera Priyatna

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Abstract

The use of conventional feeds which is partly derived from imports in laying chicken rations up to 80%. Substitution of conventional feed with fermented non-conventional feed are strived to reduce dependence on imported feed. This study was conducted to examine the effect of various types of fermented non-conventional feed on interior quality of egg. This study used 48 the Isa Brown hens aged 22 weeks. The experiment used a complete randomized design with 6 non-conventional local feed substitution treatments namely ration with 0% (R0), 10% (R1), 20% (R3), 30% (R4), 40% (R4), and 50% (R5) fermented non-conventional feed. The results showed that feed intake of ration containing local fermented feed 10% lower than other rations. The results showed that fermented non-conventional feeds on laying egg ration not significantly affected on the egg index and Haugh Unit values but had an effect on increasing the egg white weight and increasing on egg yolk index ($P < 0.05$).

Keywords: Egg Index; Egg White Weight; Egg Yolk Weight; Egg Yolk Index; Haugh Unit

Topic: Animal Sciences

[ABS-42]
The Effect of Giving Fermented Non-Conventional Feed to Chicken Egg Sensoris Quality

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Abstract

This study aims to examine the sensory quality of chicken eggs (hedonic test and hedonic quality) from laying hens of Isa Brown strain fed rations containing non-conventional fermented feed. The animals that were used by 24 chickens aged 18 weeks were ready for production. The feed used is ration containing non-conventional fermented feed. The research design used was a Completely Randomized Design (CRD) of 6 treatments and 4 replications. The treatment consisted of R0: 100% Basic Feed, R1: 90% basic food + 10% non-conventional fermented feed, R2: 80% basic feed + 20% fermented non-conventional feed, R3: 70% basic feed + 30% non-conventional feed fermented, R4: 60% basic feed + 40% fermented non-conventional feed, R5: 50% basic feed + 50% fermented non-conventional feed. Data were analyzed by the Kruskal Wallis test. The variables observed were hedonic test and hedonic quality test (egg white color, egg yolk color, aroma, taste and texture). The results showed that the ration containing non-conventional fermented feed had no significant effect ($P > 0.05$) on egg white color, egg yolk color, aroma, taste and texture in the hedonic test. In hedonic quality significant ($P < 0.05$) on the aroma of chicken eggs.

Keywords: Sensory Quality of Chicken Eggs, Fermentation Ration

Topic: Animal Sciences

[ABS-43]

Performance and Meat Quality of Local Ducks Fed Rations Containing Torch Ginger (Etlingera Elatior) Flowers and Betel (Piper Betle Lin) Leaves

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Department of Animal Science, Faculty of Agriculture, Djuanda University, Bogor, Indonesia

Abstract

Compared to chicken, duck still has low productivity and other limitation caused by its meat off-odor. Therefore, duck production performance and meat quality need to be improved. The inclusion of feed additives such as betel (Piper betle linn) leaves and torch ginger (Etlingera elatior) flowers was done to improve production performance of ducks. This study was aimed at assessing the effects of the inclusion of betel leaves and torch ginger flowers in basal ration on production performance and meat quality of local ducks in growing phase. A completely randomized design in 4x4 factorial scheme with three replicates was used. The first factor consisted of four levels of torch ginger flower solution, namely 0, 2.5, 5, and 7.5%. The second factor consisted of four levels of betel leaf solution, namely 0, 2.5, 5, and 7.5%. Results showed that no significant differences ($P>0.05$) were found in body weight gain, feed intake, feed conversion, and mortality rate. No differences ($P>0.05$) exited among treatment with regard to final pH, cooking loss, shear force and water holding capacity. It was concluded that the inclusion of betel leaves and torch ginger flower did not improve the performance productivity and meat quality of male local ducks.

Keywords: Feed Conversion, Cooking Loss, Shearforce, Water Holding Capacity

Topic: Animal Sciences

Food Sciences (10)

Wednesday, September 26, 2017
13.00 - 15.30
Session Chair: Dr. Siti Irma Rahmawati

Meeting Room 4
Floor 1

[ABS-2] Improvement in Canistel (Pouteria campechiana) Fruit Flour Processing Based on Its Physicochemical, Phytochemical, and Sensory Characteristics
Sri Rejeki Retna Pertiwi, Siti Nurhalimah, Aminullah

[ABS-3] Fatty Acids Composition of Processed Beef Fats Using Gas Chromatography Mass Spectrometry and Principle Component Analysis
Aminullah, Mardiah, Lukmanul Hakim, Hanna Sutsuga, Tetty Kemala

[ABS-4] Characteristics of Biodegradable Plastic Carrageenan- Based With Addition of Chitosan
Mursida, Tasir, Sahriawati

[ABS-9] Formulation of Low Fat Kefir From Bambara Groundnut (Vigna Subterranae) With Variety of Fermentation Time and Starter Concentration
Dwi Aryanti Nurutami, Sri Rejeki Retna Pertiwi, Nurul Syarifah

[ABS-10] Characteristic of Mungbean Yoghurt with the Additon Extract Kelor Leaves (Moringa oliefera)
Intan Kusumaningrum, Sri Rejeki Retna Pertiwi, Anisha Putri Damayanti

[ABS-20] The Physicochemical Properties and The Levels of Carotene Fruit Alkesa Flour (Pouteria campechiana).
Noli Novidahlia, Intan Kusumaningrum, Duma Indrajaya.

[ABS-22] Characteristics Physicochemical of Nano-Water Kefir Produced by Wet Milling Method as Alternative material of Halal Gelatin Substitute.
Lia Amalia, Noli Novidahliaa, Distya, Sri Yulianib

[ABS-26] The Addition of Pectinase and Celullose Enzymes on Roselle Extract and Its Effect on The Chemical Compound of The Produced Effervescent Tablets
Tiana Fitrilia, Mardiah, Siti Irma Rahmawati, Lucianawati Dewi

[ABS-41] Optimization of Roselle (Hibiscus Sabdariffa L.) Extraction Conditions With Pectinase and Cellulase Enzymes Using Response Surface Methodology
Mardiah, Siti Irma Rahmawati, Noli Novidahlia, Rima Nidaul Hasanah, Zaenal Hasan.

[ABS-44] Antioxidant Ready To Drink Baverage From Suruhan (Peperomia Pellucida) Extract Using Pressurized Liquid Extraction
Siti Irma Rahmawati, Mardiah, Endrianur Rahman Zain, Syahril Akil, Riska Nauli

[ABS-2]

Improvement in Canistel (Pouteria campechiana) Fruit Flour Processing Based on Its Physicochemical, Phytochemical, and Sensory Characteristics

Sri Rejeki Retna Pertiwi, Siti Nurhalimah, Aminullah

Department of Food Technology and Nutrition, Faculty of Halal Food Science, Djuanda University, Bogor, Indonesia

Abstract

Canistel contains high starch and beta-carotene which can be converted into flour for main ingredient of non-gluten products. However, this fruit contains sap resulted in unpleasant flavor. The objectives of this research were to evaluate the effects of submerging in citric acid and salt solution with different concentration and time on sensory and phytochemical characteristics, to evaluate the effects of drying temperature and time on sensory, physicochemical characteristics of canistel fruit flour. The research method consisted of two phases namely determining sensory and phytochemical characteristics with two treatments i.e salt 0%, 5%, 7,5%, 10% and submerging time 30 and 60 minutes as well as citric acid 0 M, 0.1 M, 0.3 M , 0.5 M and submerging time 5 and 10 minutes. The second phase was determining sensory and physicochemical characteristics with drying temperature 30C, 40C, 50C and drying time 6 and 8 hours. Results showed that salt solution could eliminate bitter taste in canistel fruit flour more than citric acid based on phytochemical and sensory characteristics as well as retain its orange color. Drying temperature significantly affected yield, moisture, carbohydrate, fiber, starch, energy contents, but did not affect bulk density, protein, fat, ash, sugar, beta-carotene contents. Drying time 6 and 8 hours did not affect the quality of canistel fruit flour. The chosen processing of canistel fruit flour in this research was the treatments of submerging in salt solution 7,5% for 30 minutes and drying temperature 40C for 6 hours using tray dryer.

Keywords: Canistel, Drying, Flour, Physicochemical, Submerging

Topic: Food Sciences

[ABS-3]

Fatty Acids Composition of Processed Beef Fats Using Gas Chromatography Mass Spectrometry and Principle Component Analysis

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Abstract

Cooking process on food will modify the composition which was contained in the food. These changes may be the specific characteristics of a processed material to be tested. The objective of this research was to study the changes in fatty acid composition of fried, steamed, and roasted beef fats which were extracted using Folch extraction method and analyzed using Gas Chromatography-Mass Spectrometry and principle component analysis. The results showed that total lipid of fried beef fat was higher than that of raw and other processed beef fats. While, total lipid of steamed and roasted beef fat was lower than that of raw beef fat. Fatty acids of C19:0, C19:1, C20:0 and C20:1, which were detected in raw beef fat, were not detected in the processed beef fats. Based on analysis of variance, the saturated fatty acids such as palmitic acid after cooking process were relatively increase, in contrary, the unsaturated fatty acids such as linoleic acid tend to decrease. In addition, principle component analysis also showed that raw and processed beef fats were clustered separately which indicate they have different chromatogram pattern and support the changes in processed beef fats compared to raw beef fat.

Keywords: Beef Fat, Fatty Acid Profile, Cooking Process, Principle Component Analysis

Topic: Food Sciences

[ABS-4]

Characteristics of Biodegradable Plastic Carrageenan- Based with Addition of Chitosan

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Pangkep State Polytechnic of Agriculture

Abstract

Shrimp belongs to crustaceae class, where the content of chitin leftover including head, skin and tail reach 42-57%. Some researchers have conducted on chitosan characterization of chitosan from vannamei shrimp skin and tiger shrimp skin. Chitosan from vannamei shrimp skin have solubility and DD 89,73% and 83,42% respectively, while chitosan from tiger shrimp skin have solubility and DD 88,74% and 83,42% respectively. Hydrophilic polymer which is polysaccharide sulfate that can be extracted from red seaweed (Rhodophyceae) is called carrageenan. Carrageenan used in this research is kappa-carrageenan type. The advantages of carrageenan as biodegradable plastic are it can produce a good gel, elastic, edible, and can be restructured. The disadvantage is that carrageenan has low ability as a barrier to moisture transfer that limits its use as packaging. The use of carrageenan and chitosan are expected to provide better characteristics of biodegradable plastic. This study aims to characterize biodegradable plastics of carrageenan with additional chitosan, and to find out the best concentrations of two types of chitosan (vannamei shrimp skin and tiger shrimp skin) added in the biodegradable plastics from carrageenan. This research using complete random sampling design, the first factor is the types chitosan (vannamei shrimp skin and tiger shrimp skin), the second factor is the production of biodegradable plastic from carrageenan added chitosan with variation of concentration of: 0%, 1%, 2%, 3%, 4%, 5% and 6% w / v respectively with 20 ml for each volume. The results of the research showed that the best characteristic of biodegradable plastic was obtained from the addition of chitosan 6% for each chitosan either from white shrimp shells or from tiger shrimp chitosan shells. The result of this biodegradable plastic can only be used as packaging material for ready-to-eat food products as it has a very high solubility that reach up to 100%.

Keywords: Biodegradable Plastic, Carrageenan, Characterization, Chitosan, Tiger Shrimp Skin, Vannamei Shrimp Skin.

Topic: Food Sciences

[ABS-9]

Formulation of Low-Fat Kefir From Bambara Groundnut (Vigna Subterranae) with Variety of Fermentation Time and Starter Concentration

Dwi Aryanti Nurutami (*), Sri Rejeki Retna Pertiwi, Nurul Syarifah

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Abstract

Kefir is one of probiotic product which contains yeast and lactic acid bacteria as the agent of fermentation and a good intestinal microflora. It makes kefir really good for health. But kefir usually made from animal milk, which make the kefir contains high fat. And to make it become low-fat product, it should made from vegetable milk. Bogor was famous with its Bambara groundnut, the citizen always called kacang Bogor. But they only use it just to be a snack, so to make them become more valuable, it can be made into kefir. The aim of this research was to find out the best formulation of Bambara groundnut kefir with a variety of fermentation time and concentration of starter. There were two kind of raw material that was used, such as 100% Bambara groundnut extract and Bambara groundnut extract with skim milk addition (50:50). The raw material was added with 10% sugar and kefir grains / starter with variety concentration about 2.5%, 5%, and 7.5%. The fermentation process was carried out for 24, 48, and 72 hours. The results showed that the best formulation of the kefir was made from 100% Bambara groundnut with 7.5% starter addition and 72 hours of fermentation. It showed that Bambara groundnut kefir has low fat about 2,43% and the amount of lactic acid bacteria and yeast about 1,5x109 CFU/gram and 4,3x107 CFU/gram respectively. The protein content of it still low, it was about 1,87%.

Keywords: Low Fat, Kefir, Bambara Groundnut

Topic: Food Sciences

[ABS-10]
Characteristic of Mungbean Yoghurt with the Additon Extract Kelor Leaves (Moringa oliefera)

Intan Kusumaningrum, Sri Rejeki Retna Pertiwi, Anisha Putri Damayanti

Djuanda University, Bogor, Indonesia

Abstract

Yogurt can be made from leguminosae. In this research yogurt made from mungbean with adding extract kelor leaves. This research is aim to know characteristic of mungbean yogurt with adding extracts kelor leaves. This research used Completely Randomized Design (CDR) factorial. First factor is starter concentration with three treatment level 5 percent, 10 percent, and 15 percent. The second factor is extracts kelor leaves concentration with two treatment 5 percent and 10 percent. Analysis was about total lactic acid, pH value, amount of Lactic Acid Bacteria, and viscosity. The best yogurt will be analysis characteristic of sensory (quality of sensory and hedonic), proximate (ash, protein, and fat content) and calcium. The best yogurt is yogurt with starter 5 percent and extract kelor leaves 5 percent contains 1,03 percent total lactic acid, pH value 4,54, total lactic acid bacteria 1,5 kali 108cfu per gram, viscosity 2200 cP, ash content 1,25 pc, protein content 5,58 percent, fat content 0,94 percent, and calcium 52,28 mg per 100g.

Keywords: Kelor Leaves, Mungbean, Starter, Yoghurt

Topic: Food Sciences

[ABS-20]
The Physicochemical Properties and the Levels of β-Carotene Fruit Alkesa Flour (Pouteria campechiana).

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Department of Food Technology, Faculty of Halal Food Science, Djuanda University, Bogor, Indonesia

Abstract

This study aims to know the influence of drying temperature and time, also both interactions on the physical properties and the quality of the organoleptic fruit alkesa flour produced. Then from the results of the selected the greatest results for determining the selected products are then analyzed chemical, crude fiber and levels of β-carotene. This research was conducted using the method of complete random design with two factors which include drying temperature (A): 50 degrees Celsius (50C), 60C, 70C and drying time (B): 5, 6, 7 hours. The parameters of the physical test carried out includes the yield, water absorption and bulk density. Test parameters the quality of sensory used are color, aroma and texture. The results showed that drying temperature and drying time significantly affect the yield and bulk density, also the quality sensory of color and texture, but did not significantly affect to water absorption and the quality sensory of aroma. The interaction of treatment drying temperature and drying time significantly affect the yield and bulk density, also the quality sensory of color, aroma and texture but did not significantly affect to water absorption. The flour produced from 70C drying temperature with 7 hours drying time is selected products.

Keywords: Alkesa Flour, Drying Time, Drying Temperature

Topic: Food Sciences

[ABS-22]
Characteristics Physicochemical of Nano-Water Kefir Produced by Wet Milling Method as Alternative material of Halal Gelatin Substitute.

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Abstract

The use of gelatin is quite extensive in many applications, but there are some obstacles for consumers to consume these products because of doubtful halal. Therefore, by looking at existing research, water kefir able to substitute gelatin. In this study, the reduction of water kefir size using nanotechnology with wet process method. The measurement of water kefir dimension was done 2 times down which then was tested by PSA and SEM. Nano-sized water kefir obtained size of 332.6 nm. Kefir water sized nano and gelatin in physicochemical test, then compared both. The results of independent analysis of T-test of water kefir measuring 332.6 nm and gelatin showed that the mean values of water content test parameters, ash content, viscosity, pH, and swelling gel were significantly different (P <0.05). Nano-sized water kefir cannot be tested for gel strength because it cannot form gel. For gelatin solubility test, gelatin is not soluble in aquades, 4% NaOH, and 1% NaHCO3. While nano-sized water kefir can dissolve perfectly with aquades solvents, 4% NaOH, and 1% NaHCO3.

Keywords: Gelatin, Water Kefir, Nanotechnology.

Topic: Food Sciences

[ABS-26]

The Addition of Pectinase and Cellulose Enzymes on Roselle Extract and Its Effect on the Chemical Compound of the Produced Effervescent Tablets

Tiana Fitrilia (a), Mardiah (b), Siti Irma Rahmawati (b), Lucianawati Dewi (a)

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(b) Departement of Halal Food Magister, Djuanda University, Bogor, Indonesia

Abstract

The extraction of roselle petals is a processed product of roselle that is very beneficial because of its anthocyanin compound which acts as an antioxidant. Pectinase and cellulose enzyme (1:1) were used to optimize the process of extraction of roselle. This research was conducted to determine whether the addition of enzyme in the extract of roselle petals could increase the antioxidant compound and the quality of the chemical compound on the tablet effervescent. The method that used in making effervescent tablet was wet granulation. Product analysis consist of granule and tablet analysis. The result of granule analysis consisting of test loss on drying had a value of 1%, flow rate of 8,06 seconds, angle of repose of 27,32 degree and compressibility of 7,69%. While the result of tablet analysis consisting of weight uniformity had a value of 4,0085 g, friability of 0,2% and the time dissolve of 2,41 minutes. Therefore, all analyzes in this study have met requirements of the effervescent tablet.

Keywords: Effervescent Tablets, Enzyme, Extraction, Roselle

Topic: Food Sciences

[ABS-41]

Optimization of Roselle (Hibiscus Sabdariffa L.) Extraction Conditions with Pectinase and Cellulase Enzymes Using Response Surface Methodology

Mardiah (a), Siti Irma Rahmawati (a), Noli Novidahlia (b), Rima Nidaul Hasanah(b), Zaenal Hasan (c)

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(b) Departement of Food Technology, Djuanda University, Bogor, Indonesia
(c) Departemen of Biochemistry, Bogor Agriculture University

Abstract

Roselle petals can be made into extracts as a source of raw material for food products and other products. The use of pectinase and cellulase enzymes can increase the yield including the anthocyanin content. This study aims to optimize the extraction conditions of roselle flower petals (of Hibiscus sabdariffa L) using pectinase and cellulase enzymes by using Response Surface Methodology (RSM) (Mardiah, 2017). The treatment conditions were using pectinase and cellulase enzyme (1: 1) with concentrations in the range between 500-1500 ppm, extraction temperature between 35-65 Celsius and extraction time between 30-90 minutes. Analysis of the best treatment was carried out on the yield level, anthocyanin content and total dissolved solids tested using central composite design, obtained R2 values for the three responses of 0.6. The results showed that based on the surface response, the optimum conditions of the best extraction of the rosella at the addition of enzyme concentration of 1117 ppm, extraction temperature of 58 Celsius and extraction time of 30 minutes. In this condition, the yield of dried extracts of rosella was 85.23%, anthocyanin levels 448.35 mg / L and total dissolved solids 2.17 Brix.

Keywords: Roselle, Response Surface Methodology, Anthocyanin, Yield, Pectinase, Cellulase

Topic: Food Sciences

[ABS-44]
Antioxidant Ready to Drink Beverage from Suruhan (Peperomia Pellucida) Extract Using Pressurized Liquid Extraction

Siti Irma Rahmawati, Mardiah, Endrianur Rahman Zain, Syahril Akil, Riska Nauli

Djuanda University, Bogor, Indonesia

Abstract

Peperomia pellucida has been used as a herbal for treatment various disease because of its bioactive components. Until now conventional extraction was done by decoction or juicing however, those extractions have several drawbacks such as time consuming and high risk of loss bioactive compounds. Therefore, Pressurized Liquid Extraction (PLE) has a promising prospect to be the best method to extract bioactive compounds from Peperomia pellucida due to its effectivity. A previous study has proven antioxidant potentials of Peperomia pellucida extract by PLE. The present study attempted to produce a ready to serve herbal drink using a water extract of Peperomia pellucida. The consumer acceptable formulation selected by a sensory evaluation was investigated for the physical characteristics, microbial stability and antioxidant potentials. The overall acceptability of herbal formulation of 1:10 (extract: water), also the addition of lime and corn sugar was optimum. The antioxidant potentials the drink was 1095 ppm Vitamin C/50 g dry base Peperomia pellucida, respectively. It is concluded that Peperomia pellucida extract by PLE could be used as a valuable ingredient for the production of an herbal drink with many health benefits.

Keywords: Antioxidant, Ready to Drink Beverage, Peperomia Pellucida, Extract, Pressurized Liquid Extraction

Topic: Food Sciences

Science and Technology (7)

Wednesday, September 26, 2017
15.45 - 17.00

Meeting Room 4
Floor 1

Session Chair: Malikus Sumadyo

[ABS-12] The Model of Government Policy in Development of the Digital Economy
Bambang Sudaryana, Wellda Desvitarina

[ABS-14] Classification of Academic Basic Ability Test Items Using C4.5 Algorithm
Malikus Sumadyo, Lucky Purwantini

[ABS-16] Analysis of Consumer Preference and Consumer Acceptance Level of Halal and Natural Bath Soap
Fina Uzwatania, Aditia Ginantaka, Awaludin

[ABS-18] Design of Valve Control System on Organic Rankine Cycle (Orc) Geothermal Hot Water Dieng
M. Hariansyah, Yogi Sirodz Gaoz

[ABS-19] The Role of International Trade to Economic Growth: The Case of Indonesia
Hendri Tanjung and Abrista Devi

[ABS-21] Predicting the Depth and Water Velocity of Bio-sand Filter with Linear Models for the Removal of Organic Matter from Rainwater
Rita Rahmawatia, Zahra Khusnul Lathifahb, Beddy Iriawan Maksudi, Ginung Pratidina, Mohamad Ali Fulazzaky

[ABS-39] Controlling Least Absolute Deviation Regression Coefficient on the Meaningful Range Using Linear Programming
Setyono, Agus Mohamad Soleh, Nur Rochman

[ABS-12]
The Model of Government Policy in Development of the Digital Economy

Bambang Sudaryana, Wellda Desvitarina

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Abstract

The accuracy of policy and regulation design will define the speed and the deepness of Indonesian in utilizing and developing digital economy. Therefore, the policy maker needs to understand the dynamics and the complexity of digital economy, especially e-commerce. The aim of this research is to acknowledge how far the influence of digital economy policy towards the development of small and medium enterprises (UKM) is, the involvement of young generation and rural communities, and the inclusivity that could support the achievement of Indonesian e-commerce Road Map target. The methodology used in this research is the method of quantitative; the institution of policy and regulation maker in Bandung, the small and medium enterprises (UKM) management and the youth organization, as well as the society as the research subjects. The instruments of the research use questionnaires as well as the objective of the interview. The data analysis uses multiple linear regression method, by test T and test F. Research findings in this study shows that digital economic policy has a positive impact on the development of small and medium enterprises (UKM), the involvement of young generation and rural communities, and the inclusivity that could support the achievement of Indonesian e-commerce Road Map target.

Keywords: Policy, Digital Economy, E-Commerce, Roadmap

Topic: Science and Technology

[ABS-14]
Classification of Academic Basic Ability Test Items Using C4.5 Algorithm

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Abstract

The academic basic ability test (TKDA) is a test of a person on verbal, quantitative and reasoning abilities. Islamic University 45 Bekasi added material in the test to the cultural awareness in Bahasa, English, Pancasila and religion. Item feasibility testing use item difficulty index and item discrimination index. Assessment of items to be maintained, improved, repaired or discarded depends on the measurement results which are a combination of the two measurements. In a item bank that has a number of items reaching hundreds to thousands, it will give problems in the process of speed and accuracy. This study aims to examine patterns based on TKDA material and cultural awareness material. The method used is the measurement results using the C4.5 algorithm on the TKDA material, cultural awareness material and a combination of both. Tests were given to 123 participants to do 100 items which consisted of 60 TKDA material questions and 40 cultural awareness questions. The results of this study will help determine the decision on items.

Keywords: Academic Basic Ability Test Items, C4.5 Algorithm, Difficulty Level, Discriminant Factor

Topic: Science and Technology

[ABS-16]
Analysis of Consumer Preference and Consumer Acceptance Level of Halal and Natural Bath Soap

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Abstract

The increase of number of Bath Soap Producer in Indonesia, giving many options for consumer to choose the Bath Soap product. Preference Analysis is needed to be conducted for new Bath Soap Product to survive in the competition. This research aims to identify the consumer acceptance based on sensory attributes (overall) of Natural Bath Soap that can affect the consumer, to analyze the attributes that into consumer consideration to choose Bath Soap Product, and to design a Halal and Natural Bath Soap. The first stage of this research is Consumer Preference Analysis of Natural Bath Soap. The second stage of this research is designing a Halal and Natural Bath Soap which it is attributes matched with the Consumer Preference Analysis Result. The analysis consists of Organoleptic Test (Hedonic Test) and Quality Test for water content, FFA, alkaline free, and pH. The consumer preference analysis result shows that 25 from 30 consumer (83.3%) choose Oval shape Bath Soap, Honey was chosen as active ingredient by 86.7% of consumer, and 60% of the consumer is prefer Lemon Grass for the Bath Soap aroma. Hedonic test result shows that every attribute does not have any significant effect to the consumer except the bath soap shape.

Keywords: Preference, Soap

Topic: Science and Technology

[ABS-18]
Design of Valve Control System on Organic Rankine Cycle (Orc) Geothermal Hot Water Dieng

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Abstract

Low-temperature geothermal energy is considered non-commercial to be developed, in line with ORC (Organic Rankine Cycle) technology advancements, geothermal energy can be used as a working fluid heating medium. So, the idea arose to develop a geothermal power plant with ORC system. PLTP ORC is planned to be built with a capacity of 100 kW, in Dieng, Central Java. One of the most important part of ORC technology is the coordination of control valve (CV). The objective to be achieved is to produce a control system to manage the coordination of some valves under normal and normal conditions, as well as response time of Control Valve (CV) starting N-Pentane flow stabilization process, heating, operational and normal operation and system operational termination. To integrate all control valve and temperature and pressure sensors in use PLC (Programmable Logic Controller). The method used is to install 2 units CV1 and CV2 on brine water inlet to evaporator and preheater, 1-unit CV3 mounted on output preheater and CV 4 as bypass between turbine and condenser, CV 5 installed to insert cold water as fluid pending media work, CV 6 is connected between the evaporator and the turbine. The test result to stabilize the N-Pentane flow in the evaporator and preheater takes 120 minutes, and the N-Pentane heating of the 42 oC from phase of the liquid phase to the vapor phase takes 100 minutes, and the turbine gets a pressure of 15 bar, with 6,000 rpm

Keywords: Control Valve (CV), Control System, Organic Rangkine Cycle (ORC), Hot Water, Geothermal.

Topic: Science and Technology

[ABS-19]
The Role of International Trade to Economic Growth: The Case of Indonesia

Hendri Tanjung and Abrista Devi

Universitas Ibn Khaldun Bogor

Abstract

This study is aimed to identify the effect of export and import toward economic growth in Indonesia. Using the monthly data from the year 1999 to 2017 and Vector Autoregression analysis, it is found that Gross Domestic Product (GDP) will response negatively in short term and positively stable in the long term in period of 15 due to the shocked of export. Furthermore, GDP will response positively in short term and positively stable in the long term in period of 20 due to the shocked of import. There is no significant effect export to GDP as well as import to GDP in the short term and long term. Therefore, there is no effect of international trade (export and import) to economic growth for Indonesia.

Keywords: Export, Import, Economic Growth.

Topic: Science and Technology

[ABS-21]

Predicting the Depth and Water Velocity of Bio-Sand Filter with Linear Models for the Removal of Organic Matter from Rainwater

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Abstract

The use of rainwater harvesting from roof surface at household and community level for domestic purposes in mountainous and rural areas must be treated as being a part of the efforts to provide access to drinking water such as using bio-sand filter. Efficiency of bio-sand filter (BSF) must be monitored to ensure the quality of drinking water for consumer health and safety. A common approach to address the monitoring of raw and treated water remained ineffective in controlling water quality. Accurate design to achieve an expected efficiency of the drinking water treatment system is still not available to most BSFs since the present physical models were not originally able to calculate the design parameters. The aim of this study was to develop the linear models for calculating the depth of sand filter and water velocity to be used in operating the BSF treatment system to remove organic pollutants from rainwater. All parameters in equation are physically meaningful, experimental data validation showed the equations remained accurate. The performance of BSFs can be predicted using the models to gain an insight in designing of both depth of sand filter and water velocity.

Keywords: Bio-Sand Filter, Linear Model, Filter Depth, Organic Matter, Rainwater Harvesting, Water Velocity

Topic: Science and Technology

[ABS-39]
Controlling Least Absolute Deviation Regression Coefficient on the Meaningful Range Using Linear Programming

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Abstract

During this time, regression analysis is used to model the mean of response as a function of some independent variables, using the least squares (LS) method. In general, the LS method is able to describe well the measure of central tendency, but LS regression is not robust against outliers. Therefore, in certain cases it is needed the regression that minimizes the sum of absolute residuals (least absolute deviation - LAD), which is known more robust. So far, the value of the regression coefficient is not modeled and only depends entirely on the data processed. In some cases, the sign and the value of regression coefficients need to be controlled, in order to be in the meaningful range. The results of this study showed that the modification of the constraints on the LAD regression able to control the regression coefficients to be in the meaningful range. The results of bootstrap showed that distribution of controlled regression coefficients was different from distribution of uncontrolled regression coefficients.

Keywords: Linear Programming; Absolute Residual; Constraints; LAD; Median; Regression

Topic: Science and Technology

Soil and Environmental Sciences (3)

Wednesday, September 26, 2017
15.45 - 17.00

Meeting Room
Mezzanine Floor 1,5

Session Chair: Rosy Hutami

[ABS-6] Land Use Compatibility and Dependency Survey in Bekasi City through Delphi Method
Seta Samsiana, Herlawati, Mohammad Harun Alrasyid, Rahmadya Trias Handayanto

[ABS-24] Congestion Reduction, Fuel Consumption and Environmental Impact-Case for Typical Urban Transport in Developing Countries
Muhammad Nanang Prayudyanto, Ofyar Z. Tamin, R. Driejana

[ABS-34] Cisadane River Water Quality Analysis in Tangerang City using the STORET Method Idi Namara
Idi Namara

[ABS-6]

Land Use Compatibility and Dependency Survey in Bekasi City through Delphi Method

Seta Samsiana (a), Herlawati (b), Mohammad Harun Alrasyid (a), Rahmadya Trias Handayanto (a)

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(b) STMIK Bina Insani 2

Abstract

In land use optimization, the relation among land uses are needed. These relations are used for calculating the compatibility and dependency scores of every land-use relationship. Through the use of these scores, the land use allocation will be safer because the negative effects caused by improper allocation are minimized. This paper aims to analyze compatibility and dependency score of ten land-use class, namely, commercial, industrial, elementary school, middle school, sport, medical, park, low density settlement, and high-density settlement. Delphi method was used to gather land-use class relations through a survey to expert research participants including lecturers, planners, local government, and environmentalists. Compatibility and dependency scores of every land-use class relation in Bekasi City are found from this study

Keywords: Land Use, Rounded Survey, Sustainable Development, City Plan, Post-Suburbanization

Topic: Soil and Environmental Sciences

[ABS-24]

Congestion Reduction, Fuel Consumption and Environmental Impact- Case for Typical Urban Transport in Developing Countries

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Abstract

After ten years the concept of Jakarta road pricing apparently discussed until now no implementation is decided. The concept of road pricing is not even included in the 2020 governments plan following Kyoto Protocol to reduce CO2 emissions. This study is intended to examine whether road pricing in typical developing countries, Jakarta to reduce traffic congestion. The method is subsequently presented using 4 levels of analysis: selection of road pricing type, modal shift model, assignment model, combined area-indicators evaluation. The study analysis found that road pricing should be combined with integrated parking management for middle technology implementation, as push and pull policies. As predict, the impact using the combined strategy will provide of fuel consumption reduction of 2.14% in Jakarta city-wide, emission loading also reduce of 97 tons of NOx and 67,855 tons of CO.

Keywords: TDM, Road Pricing, Parking, Public Transport

Topic: Soil and Environmental Sciences

[ABS-34]
Cisadane River Water Quality Analysis in Tangerang City using the STORET Method Idi Namara

Idi Namara

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Abstract

The Cisadane River is the main river in Tangerang City, the Cisadane River water is used for irrigation, industry and municipal supply. In addition, this river is also an icon for the City of Tangerang. However, there is a big problem in this river, namely the high pollution in the river body. The high population growth, the development of the number of industries and the development of the construction sector in the Cisadane watershed area of Tangerang City, has an impact on the amount of waste produced as well as the potential for river pollution. The method used in this study is direct observation as well as water sampling to complete secondary data from the Tangerang City Environment Agency. The number of river water samples studied were 16 locations in residential, industrial and mixed land areas. The results of the survey and water quality data were carried out by the land use clatter-based description analysis, then analyzed using the STORET method to determine the level of river water pollution. The parameters used are 8 parameters. The final result shows that from location 1 to location 16 the level of water quality is in class D (bad condition) or heavily polluted.

Keywords: Environment Agency, STORET Method, The Cisadane River

Topic: Soil and Environmental Sciences

Biological Sciences and Biotechnology (2) / Halal Science (1)

Wednesday, September 26, 2017
15.45 - 17.00

Meeting Room
Mezzanine Floor 1,5

Session Chair:

[ABS-8] Ethanol Extract (Colocasia esculenta (L.) Schott.) Hideung Cultivar as Anti-scabies through In-Vitro
I Gusti Ayu Manik Widhyastini, Febi Nurilmala, Misja

[ABS-28] Study the Compatibility of Taq Polymerase in Loop-Mediated Isothermal Amplification (LAMP) Method for Halal Food Detection
Rosy Hutami, Raafqi Ranasasmita, Henny Nuraini, Joko Hermanianto, Mira Suprayatmi, Nida Idzni

[ABS-25] Study of Cleaning Agents Performance in Removing Pork Substance on Food Equipments After Ritual Purification
Rosy Hutami, Joko Hermanianto, Nancy Dewi Yuliana

[ABS-8]
Ethanol Extract (Colocasia esculenta (L.) Schott.) Hideung Cultivar as Anti-scabies through In-Vitro

I Gusti Ayu Manik Widhyastini, Febi Nurilmala, Misja

Universitas Nusa Bangsa, Bogor

Abstract

The purpose of this research is to be aware of the potential taro extract as anti-scabies. Efforts have been made towards the swarming number of scabies caused by the mites Sarcoptes scabiei, which attacks the skins of cattle. Treatments relied more on synthetic chemical drugs that are more effective but are expensive in cost. Taro plants (Colocasia esculenta (L.) Schott) are mainly found in farmlands. Talas Bogor is a potential larvacide, able to kill mosquito larvae, predicted to have anti-parasite properties against mites. This research includes phytochemical tests (flavonoid, tannin, saponin, alkaloid, calcium oxalate) of the identified plant, effectiveness test of the taro extract towards the mites through in vitro. The results of the effectiveness test of the wild taro extract (Colocasia esculenta (L).Schott) cultivar Hideung used in in-vitro with probit analysis obtained an LC50 value of 50.11% for 4 hours treatment time, an LC50 value of 24.54% for 6 hours' time, able to exterminate 100% of the mites tested, using Neguvon as a positive control, and 10.96% LC50 value for 3 hours treatment time. Treatment of wild taro extracts (Colocasia esculenta (L). Schott Cultivar Hideung with 96% ethanol solvent is a potential alternative for scabies treatment.

Keywords: Scabies, Anti-Parasite

Topic: Biological Sciences and Biotechnology

[ABS-28]

Study the Compatibility of Taq Polymerase in Loop-Mediated Isothermal Amplification (LAMP) Method for Halal Food Detection

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Abstract

Loop-Mediated Isothermal Amplification (LAMP) is a new method in nucleic acid analysis that amplifies target in isothermal conditions and suitable for analysis with low-resource condition. This method usually needs a polymerase enzyme that has strand displacement activity such as Bacillus stearothermopilus (Bst) polymerase. But, this enzyme was rarely available in the laboratory, either the cost is higher than usual polymerase. Taq polymerase is a polymerase enzyme that commonly exist in laboratory, easier to be accessed, and has a lower cost comparing to the Bst polymerase. Although, it does not have strand displacement activity. Thus, this research conducted with Taq polymerase in order to study the compatibility of Taq polymerase in LAMP method. We used cytochrome b from pork as target gene for halal detection need. For conducting the strand displacement activity in DNA amplification, we used denaturation process (95oC), besides annealing (65oC), and final extension (80oC). The result showed that there was no band appeared on electrophoresis gel for the LAMP product. It was suggested that, because of Taq polymerase does not have any strand displacement activity, it did not work in LAMP method, even though it was combined with denaturation process. It can be concluded that Taq polymerase was unsuitable for LAMP analysis.

Keywords: Cytochrome B, Lamp, PCR, Porcine DNA, Troponin I

Topic: Biological Sciences and Biotechnology

[ABS-25]
Study of Cleaning Agents Performance in Removing Pork Substance on Food Equipment After Ritual Purification

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Abstract

Halal food includes not only ingredients, but also including the purity of the equipment it uses. There are often found clean food equipment, but not pure according to sharia. This food equipment must be purified by shariah purification in order not to contaminate and alter the halal status of the food that is in contact with it. However, ritual purification, which generally uses soil as one of its ingredients, can sometimes damage the appliance. Thus, scholars' agreements in some countries allow the use of other cleaning agents to replace the soil. This study is the first study in Indonesia that compared the ability of diver cleaning agents in removing pork substance. The aim of this study was to show the performance of cleaning agents including earth, acids, alkaline, and detergents in removing pork residue (DNA and fatty acid) on food equipment after ritual purification. Polymerase chain reaction with cytochrome b as gen target was used to detect pork DNA residue and gas chromatography mass spectrophotometry (GC-MS) was used to detect fatty acid residue. As the result, earth solution was the best cleaning agent in removing pork DNA residue and detergent was the best cleaning agents in removing fatty acid residue.

Keywords: Purification, Porcine, DNA, Fatty Acid, Cleaning Agents

Topic: Halal Science