

Conference Programme  
Papers Abstracts

# Global Innovation on Sustainability and Sustainable Development



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

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



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## 5<sup>th</sup> International Conference Sustainable Agriculture, Food, and Energy SAFE2017

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

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

### Organizing Institution



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

**IPD-40**

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**EFFECT OF STORAGE ON MICROBIOLOGICAL SAFETY OF BOTTLED PACKAGING RENDANG**

**IPD-41**

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**The Effect of Blanching Methods and Extractions on Quality of Edamame Milk Product**

**IPD-42**

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**Provision Nano Cellulose Bacteria with Acid Hydrolysis Methods with Ultrasonication Treatment**

**IPD-43**

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**Formulation of Chips from Flour of Potato Variety Granola with Application of Edible Coating**

**IPD-44**

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**CHARACTERISTIC of MILKFISH (Chanos - Chanos Forks) BONE NANO CALCIUM BY ACIDS and ALKALINE EXTRACTION**

**IPD-45**

**Novizar, Lisa Rahayu and Fauzan Azima**

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**PROFILING OF SENSORY CHARACTERISTIC OF RENDANG FROM VARIOUS PLACES IN WEST SUMATRA USING PRINCIPAL COMPONENT ANALYSIS (PCA)**

**IPD-46**

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**Designing and Experimenting Semi-automatic Green Grass Jelly Squeezer**

**IPD-47**

**Nilawati and Debby Syukriani**

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**Utilization of Rejects Laying Chickens As Raw Material Nugget Through Washing With Organic Acid Contained In Lime Fruit**

**IPD-48**

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**THE OPTIMIZATION OF DELIGNIFICATION USING WHITE ROT FUNGI AND SULFURIC ACID SYNERGISM FROM THE EMPTY PALM BUNCHES**

**IPD-49**

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**Antioxidant Activity of "Kolang-kaling" jam with higher Asian melastome fruit**

**IPD-50**

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**Characteristic of "Kolang -Kaling" Jam with Higher Java Plum Fruit Rind**

IPD-47

## Utilization of Rejects Laying Chickens As Raw Material Nugget Through Washing With Organic Acid Contained In Lime Fruit

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**Abstract**— Reality in the field with the number of farm chicken laying many of Limapuluh City will produce meat chicken laying too. Business rejects that many chicken farms in the district Limapuluhkota laying this on the one hand have a positive impact in increasing revenue and public economic involving many farmers with the scale ranging from thousands tail, up to tens of thousands or even hundreds of thousands of chickens per breeder. In addition will produce eggs that many of laying hens culled meat production are many. However, the production of meat of culled laying hens which has a lot of low quality, it is also difficult because of the high fat content. Nevertheless meat of culled laying chicken can be used as a source of raw materials for processed meat products, one of which is a nugget. Efforts to improve the quality of the meat of culled laying hens have done a washing treatment with lime with a concentration of 0%, 2%, 4% and 6% within 5 minutes laundering. The survey conducted in four sub-districts Mungka, Guguk, Payakumbuh and Harau harvesting produce chicken laying rejects namely 18 -20 months, with the average weight of her is from 2.0 to 2.5 kg . From the results of the chemical analysis laying hens culled meat, protein content is significantly different ( $P < 0.05$ ) treatment A and D with treatment B and C are 23.38% and 23.60%. Other analysis also include the levels of fat, lowest for the treatment D is 0.59% .From this research concluded that umur harvest laying chicken is almost the same in the four districts and the existing literature as well as the nutritional content of chicken meat laying still dikisaran permitted. 2. In terms of organoleptic test, which looks treatment C-laundering 4% with lime juice showed better results than other treatments.

**Keywords**— Laying Chickens, lime fruit, organoleptic test, nugget

IPD-48

## THE OPTIMIZATION OF DELIGNIFICATION USING WHITE ROT FUNGI AND SULFURIC ACID SYNERGISM FROM THE EMPTY PALM BUNCHES

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**Abstract**— The production of ethanol from recalcitrance lignocellulosic plant biomass previously conducted by delignification which is degradading the lignin. The delignification reaction is a degradation of lignin that is located on the surface of plant cells so as to facilitate the next reaction to produce ethanol, i e hydrolysis of cellulose into glucose and fermentation to produce ethanol. Delignification can be done biologically and chemically and combination of both of them. The objective of the experiment was to asses the delignification of EFB through synergism of white rot fungi activity (biology) and sulphuric acid (chemist). Three factors tested was white rot fungi species (*Omphalina* sp and TSI 2), sorghum dosage (0%, 0.1%, 0.5% and 1%) and sulphuric acid doses (5%, 10%, 15% and 20%) that there are 32 treatments. The delignification was conducted in bag log incubated in room temperature. The lignin level determined by Chesson method (1981). The lowest lignin levels was achieved through delignification using the *Omphalina* sp without sorghum and also with the addition of sulphuric acid 10%. This treatment could decrease the lignin until 13,7%. The C/N ratio levels could be decreased optimally through the delignification using the *Omphalina* sp with the addition of sorghum 1% and also sulphuric acid 15%. This treatment could decrease the C/N ratio levels until 33,95.

**Keywords**— the empty palm bunches, the delignification, *Omphalina* sp, the lignin, C/N ratio

**Utilization of Rejects Laying Chickens As Raw Material  
Nugget Through Washing With Organic Acid  
Contained In Lime Fruit**

By:

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**ABSTRACT**

Reality in the field with the number of farm chicken laying many of Limapuluh City will produce meat chicken laying too. Business rejects that many chicken farms in the district Limapuluhkota laying this on the one hand have a positive impact in increasing revenue and public economic involving many farmers with the scale ranging from thousands tail, up to tens of thousands or even hundreds of thousands of chickens per breeder. In addition will produce eggs that many of laying hens culled meat production are many. However, the production of meat of culled laying hens which has a lot of low quality, it is also difficult because of the high fat content. Nevertheless meat of culled laying chicken can be used as a source of raw materials for processed meat products, one of which is a nugget. Efforts to improve the quality of the meat of culled laying hens have done a washing treatment with lime with a concentration of 0%, 2%, 4% and 6% within 5 minutes laundering. The survey conducted in four sub-districts Mungka, Guguk, Payakumbuh and Harau harvesting produce chicken laying rejects namely 18 -20 months, with the average weight of her is from 2.0 to 2.5 kg . For all parameters in the first year of washing the best in the best use of lime juice is 4% In the second year the use of four kinds of Filler for different sensory evaluation is not real, but the highest yield lies in wheat flour filler.

**Keywords:** *Filler, Laying Chickens, lime fruit, organoleptic test, nugget*

