SAFE NETWORK
Asia Pacific Network for Sustainable Agriculture Food and Energy

SAFE2022 ISTANBUL
International Conference

# SAFE2022
## Book of Program

October 17, 2022
Istanbul University. Turkiye

EXECUTIVE CHAIRMAN
*Prof. Dr. Novizar Nazir*,
Andalas University, Indonesia

# INTRODUCTION

SAFE is BACK! After two years of virtual engagements, we are excited to see you in person. Hence, we are happy to invite you to the International Conference on Sustainable Agriculture, Food, and Energy (SAFE2022: International Conference on Sustainable Agriculture, Food, and Energy (SAFE2022): Circular Economy Implementation in Agri-food Energy Production for Community Empowerment which will be held on October 17, 2022, in Istanbul, Turkey.

We express our appreciation and thank you very much for the facilities provided by Istanbul University which is also the co-host of this conferenceThe co-host institution is ISTANBUL University, Turkiye, and ANDALAS University, INDONESIA. This conference is the 9th conference after the 1st International Conference on Sustainable Agriculture, Food, and Energy (SAFE2013) in Padang, Indonesia (12-14 May 2014), the 2nd conference SAFE2014 in Bali, Indonesia (17-19 September 2014). The 3rd conference SAFE2015 in Ho Chi Minh City, Vietnam (17-19 November 2015), the 4th conference SAFE2016, Colombo, Sri Lanka (October 20-22, 2016), the 5th conferenceSAFE2017, Malaysia, August 22-24, 2017; the 6th conference of SAFE2018, Manila. Philippines [October 19-21, 2018], the 7th conference of SAFE2019, Phuket. Thailand (October 19-21, 2019), and the 8th conference of SAFE2020 in Jeju, Korea (October 21, 2020)

# VENUE

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| Product Development-010 | UTILIZATION OF SAGO SOLID WASTE FOR BIOETHANOL PRODUCTION WITH VARIATION OF SAGO SOLID WASTE-SOLVENT RATIO AND PRETREATMENT TIME<br>Chairul[1], Muhammad Humam Ridho[2], Zultiniar[1], Alfino Hendra[3]<br>[1)] Lecturer of Chemical Engineering Department Riau University,<br>[2)] Undergraduate Student of Chemical Engineering Department Hacettepe University, [3)] Undergraduate Student of Chemical Engineering Department Riau University<br>Pulp Making Laboratory<br>Chemical Engineering Department, Faculty of Engineering, Riau University<br>Binawidya Campus H.R. Soebrantas Street Km 12.5 Simpang Baru Panam,Pekanbaru 28293. E-mail: chairul@lecturer.unri.ac.id |
| Product Development-011 | THE POTENTIAL OF NIRA WATER FERMENTATION AS A SOURCE OF PROBIOTICS TO IMPROVE BROILER PERFORMANCE.<br><br>Salvia[1], Ramaiyulis[1], Putri Retno Ramayanti[1], Debby Syukriani[1], Irzal Irda[1], Reni Novia[2], Fathardo Zudri[3]<br><br>[1]Livestock Production Technology Study Program, Agricultural Polytechnic Payakumbuh, West Sumatera, Indonesia<br>[2]Veterinary Paramedic Study Program, Agricultural Polytechnic Payakumbuh, West Sumatera, Indonesia<br>[3]Plantation Management Study Program, Agricultural Polytechnic Payakumbuh, West Sumatera, Indonesia<br>E-mail: ramaiyulis@gmail.com |
| Product Development-012 | BIOTRANSFORMATION OF MICROCRYSTALLINE CELLULOSE FROM RICE STRAW WASTE USING TGJPC-120 BACTERIA AND ITS CHARACTERIZATION<br><br>Akmal Djamaan[1*], Rika Sari Lalfari[1], Rusdi Rusdi[2], Anisa Litri[2], Asiska Permata Dewi[2], and Muslim Suardi[3]<br><br>[1)] Biotan Sumatra Laboratory, Universitas Andalas, Padang, Indonesia<br>[2)] School of Pharmacy, Stifarm, Padang, Indonesia<br>[3)] Faculty of Medicine and Public Health, Universitas Abdurrab, Pekanbaru, Indonesia<br>*Email: akmaldjamaan@phar.unand.ac.id<br>akmaldjamaan@yahoo.co.id |
| Product development-013 | THE MICROENCAPSULATION OF NONI FRUIT EXTRACT (*Morinda citrifolia* L.) WITH MALTODEXTRIN AND ITS IMPLEMENTATION AS FEED ADDITIVE ON CARCASS QUALITY AND HISTOLOGY OF INTESTINAL SENTUL CHICKEN<br><br>Tuti WIDJASTUTI, Iwan SETIAWAN,<br>Faculty of Animal Husbandry, Universitas Padjadjaran, Jalan Raya Bandung-Sumedang Km 21. Indonesia. Corresponding author email: tuti_widjastuti@yahoo.com |
| Product Development-014 | REJECTED SALT FISH MEAL IN BEEF CATTLE RATION WITH AMMONIATED RICE STRAW BASIS<br><br>Hermon, Udfa, and Fuadi<br><br>Faculty of Animal Science, Andalas University, Padang |
| Product Development-015 | ANTIOXIDANT SERUM GEL FORMULATION WITH A COMBINATION OF ROSEMARY OIL AND SECRETOME FROM MESENCHYMAL STEM CELLS<br>Marlina[1,2], Salman[2], H Filza[2], E Nur[3], and A N Poppy[3]<br><br>[1] Biotechnology Study Program, Postgraduate Andalas University, Jl. Limau Manis Padang, 25166, West Sumatera, Indonesia |

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| Product Development-010 | UTILIZATION OF SAGO SOLID WASTE FOR BIOETHANOL PRODUCTION WITH VARIATION OF SAGO SOLID WASTE-SOLVENT RATIO AND PRETREATMENT TIME<br><br>Chairul[1], Muhammad Humam Ridho[2], Zultiniar[1], Alfino Hendra[3]<br>[1)] Lecturer of Chemical Engineering Department Riau University,<br>[2)] Undergraduate Student of Chemical Engineering Department Hacettepe University, [3)] Undergraduate Student of Chemical Engineering Department Riau University<br>Pulp Making Laboratory<br>Chemical Engineering Department, Faculty of Engineering, Riau University<br>Binawidya Campus H.R. Soebrantas Street Km 12.5 Simpang Baru Panam ,Pekanbaru 28293. Indonesai<br>E-mail: chairul@lecturer.unri.ac.id<br><br>ABSTRACT-Sago solid waste is a lignocellulosic material that can be used as a raw material for bioethanol production. The lignin content in lignocellulose can inhibit the rate of saccharification by blocking access to cellulase enzymes in cellulose. The pretreatment is the initial stage of the conversion process of lignocellulose to bioethanol with the aim of reducing lignin levels in lignocellulose. The next steps in the conversion of lignocellulosic material to bioethanol are saccharification and fermentation. In this study, the pretreatment stage was carried out using 10% NaOH solution at a 4 bar pressure reactor and a temperature of 140 °C, while the saccharification and fermentation stages were carried out simultaneously (SSF) with the help of cellulase enzymes and yeast Saccharomyces cerevisiae at temperature conditions of 30 °C and pH 5. The research was carried out by varying the ratio of sago solid waste with NaOH solution were 1:5, 1:6, and 1:7 and the time of the pretreatment process started from 20, 30, and 40 minutes. The highest lignin reduction results were obtained at a ratio of 1:7 and a pretreatment time of 40 minutes, which was 60,11%, and the highest yield of sago solid waste mass was obtained at a ratio of 1:5 and a pretreatment process time of 20 minutes which was 35,14%. The results of the initial treatment stage were then continued with SSF for 0, 24, 48, and 72 hours with the highest bioethanol content of 12% at 72 hours.<br><br>Keywords: Bioethanol, lignocellulose, pretreatment, sago solid waste, SSF |
| Product Development-011 | THE POTENTIAL OF NIRA WATER FERMENTATION AS A SOURCE OF PROBIOTICS TO IMPROVE BROILER PERFORMANCE.<br><br>Salvia[1], Ramaiyulis[1], Putri Retno Ramayanti[1], Debby Syukriani[1], Irzal Irda[1], Reni Novia[2], Fathardo Zudri[3]<br><br>[1]Livestock Production Technology Study Program, Agricultural Polytechnic Payakumbuh, West Sumatera, Indonesia<br>[2]Veterinary Paramedic Study Program, Agricultural Polytechnic Payakumbuh, West Sumatera, Indonesia<br>[3]Plantation Management Study Program, Agricultural Polytechnic Payakumbuh, West Sumatera, Indonesia<br>E-mail: ramaiyulis@gmail.com<br><br>ABSTRACT- Nira Water is one of the typical Minang Kabau drinks of West Sumatra and may also be found in other areas. This traditional drink is favored by millennials in order to promote local wisdom. Nira water is also a raw material for the manufacture of "palm sugar" and some is processed into Tuak (alcoholic drink). Nira water is very easy to ferment so it cannot be used as a health drink, but it can still be used for livestock because it contains some lactic acid bacteria as a source of probiotics. The purpose of this study was to determine the potential of nira water as a source of probiotics to improve broiler performance. This study used 100 DOC broilers given fermented nira water as much as 1%, 2%, 3%, 4% in drinking water. The variables observed were broiler performance, namely body weight gain, consumption, and ration conversion and financial analysis. Giving 3% nira water in drinking water for 30 days of maintenance, can increase broiler body weight 8.56% compared to without giving, 33.2% lower ration consumption and 3.65% lower ration conversion compared to no feeding. Financially this business is profitable with an R/C of 1.19. Nira water fermentation can be used as a source of probiotics to improve broiler performance.<br><br>Keywords : nira water; probiotics; broiler, performance |

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BECOMING BIGGER TOGETHER

SAFE2022 ISTANBUL
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**9th International Conference Sustainable Agriculture, Food, and Energy (SAFE2022)**

# CERTIFICATE

**Asia Pacific Network for Sustainable Agriculture, Food, and Energy(SAFE-Network), Andalas University (Indonesia) and Istanbul University (Türkiye) jointly certify that**

## DR. RAMAIYULIS

## PRESENTER

**International Conference on Sustainable Agriculture, Food, and Energy (SAFE2022), Istanbul University, Turkiye. October 17, 2022**

CIRCULAR ECONOMY IMPLEMENTATION IN AGRI - FOOD ENERGY PRODUCTION FOR COMMUNITY EMPOWERMENT

**Prof.Dr. Anton Abdulbasah Kamil**
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