



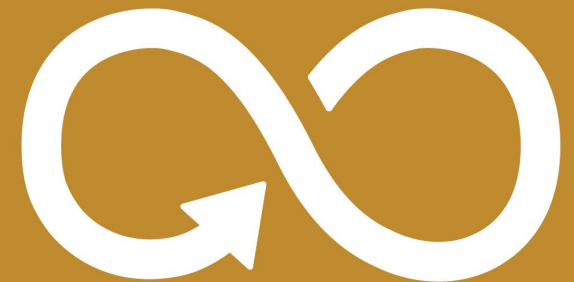
Supplementary

# Sustainability Report 2021

**SDG 12:**

Ensure sustainable consumption and  
production patterns

**12** RESPONSIBLE  
CONSUMPTION  
AND PRODUCTION





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# Learning Program

# Reclamation Technique on Post-Mining Land

The online course Reclamation technique on post-mining land, which was carried out this year, consisted of three activities, namely two pieces of training with the topic "Revegetation technology on post-mining land," 22-23 June 2021 and 27-28 October 2021, and one topic on "Forest plant nursery techniques for post-mining land rehabilitation" (15-16 July 2021). A total of 18 participants came from mining companies, consultants, and entrepreneurs. Based on the results of the pre-and post-assessment, in general, participants experienced an increase in scores, which is expected to be in line with the addition of insight. The method used is the presentation and discussion of case studies regarding the trainer's experience, among others, in conducting forest plant nurseries and evaluating soil quality. At the end of the session, participants are given the opportunity to discuss and consult about nursery and soil conditions in their respective workplaces. The benefit of this course is that participants understand the techniques and SOPs for planting t initial planting on post-mining land.



## Talkshow “Choosing Fats and Oils that Taste Food and Good for Health”

This online talk show with the topic "Choosing Oils and Fats that are Delicious in Food and Good for Health" is aimed at the general public who use oil and fat products, especially from traders of fried processed food, entrepreneurs of household scale catering services, as well as housewives (11/12/2021). The talk show aims to continue to foster the love and pride of producers and consumers of palm oil users towards domestically produced palm commodities. This helps shape the mindset of producers, consumers and users of palm oil in general, that palm oil is a vegetable oil that is equally healthy as other vegetable oils, and even has more appropriate applications for the use of certain processed food products

**Talk Show**  
"Memilih Minyak dan Lemak yang Melezatkan Makanan serta Baik untuk Kesehatan"  
Sabtu, 11 Desember 2021 || 09.00-12.00 WIB

**Sambutan & Pembukaan**

- Retna Widayawati, SP (Gemas Agraria IPB University)
- Prof. Dr. Slamet Badjanta, M. Agr (Dekan Fabeta, Departemen TP, Fabeta, IPB University)
- I. Siti Marlenty, M.M (Ketua Agraria Fabeta, IPB University)

**Narasumber**

- Dr.-Ing. Desi Husaeli, STP, M.Food.ST (Departemen TP, Fabeta IPB-SEAFST Center, LPPM, IPB University)  
Minyak Sawit sebagai Ingredient Pangan Olahan yang Melezatkan
- I. Hinda J. Muara (Ketua Dewan Redaksi Kulinerologi Indonesia) Kerasi Aneka Produk Olahan Pangan yang Dirajah dengan Minyak Sawit

**Mediator**  
Indri Indrawan, STP, MS (Universitas Tribhuvan)

**GRAND SPONSOR**  
KEMENTERIAN PERTANIAN DAN PERUMAHAN RUMAH KAWASAN PERKOTAAN DAN DESA  
"Healthy and Tasteful Palm-Oil Based Food"  
11-12/12/2021

**PEMERINTAH KABUPATEN BOGOR**  
KEMENTERIAN PERTANIAN DAN PERUMAHAN RUMAH KAWASAN PERKOTAAN DAN DESA  
11-12/12/2021

Penyelenggara: <http://ipb.ac.id/food> – [ipb.ac.id/food](http://ipb.ac.id/food)  
Email: [seafast@ipb.ac.id](mailto:seafast@ipb.ac.id) | [ipb.ac.id](mailto:ipb.ac.id)  
WA: +62 812-8129-010 (Mobi)

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Partners: [seafastcenter.com](http://seafastcenter.com), [ipb.ac.id](http://ipb.ac.id), [seafastcenter.com](http://seafastcenter.com)

## Course in Consumer Protection

FEMA, through the Department of Family and Consumer Sciences encourage sustainable consumption and production patterns through the Consumer Protection Education course. Students should be able to understand consumer protection systems (Indonesian consumer protection law, consumer protection agencies, and consumer associations), market consumer protection (product safety and liability, standard clauses and after-sales service, consumer information, consumer disputes & compensation), and consumer protection of goods and services (financial services, food, health services, sustainable consumption); and consume responsibly



# 4

## Food Waste Management Training (Foodwaste) Through the BSF Maggot Method

The Department of Economics, Resources and the Environment (Dept ESL) of the Faculty of Economics and Management (FEM) held a 'Training on Food Waste Management (Foodwaste) Through the BSF Maggot Method' in the Taman Dramaga Permai Residential Area. This activity was held in collaboration with the Student Creativity Program Team (PKM-PM) in the field of Community Service IPB University. The PKM team with the title Household Food Waste Management Training with BSF Maggot: Solutions to the Increased Food Waste during the COVID-19 Pandemic at Taman Dramaga Permai was chaired by ESL student Dandi Rivaldi Sudradjat and involved 5 other students. This training was attended by PKK women at the Taman Dramaga Permai Complex, Bogor Regency. The training discussed the management of food waste to be used as composting through the BSF Maggot method. The results of composting with this method can be used as a planting medium for urban farming. The larvae can also be reused as feed for livestock and fish.



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# 5

## Develop Food Based on Local Potential

Indonesian people tend to consume grain and oil in excess. Whereas tubers, animal food, vegetables, and nuts are still very lacking. Then it needs to be done consumption in a balanced way so that consumption conditions local food can be more evenly distributed. This was conveyed by Dr. Ir Agung Hendriadi, MEng as the Main Research Expert Ministry of Food and Socio- Economic Sector Farming in a virtual talkshow at the Exhibition Agricultural Innovation (PIP) 3.0, (30/10). This PIP 3.0 organized by the Vocational Student Association Food and Nutrition, IPB University Vocational School.



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# 6

## Training on Food Product Preservation by Heating and Freezing

The classic problem in small and medium food producers (SME) is short shelf life of the products. Food preservation can be done without any preservatives. Proper method of preservation can inhibit or prevent the growth of microbes, or even inactivate it to a certain safety level. The benefit of this online activity is to train SMEs in food sector to prolong the shelf life of their food products through heating and freezing (02/10/2021).



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# Student Activities

## One Village One Ceo: Empowering Community Groups To Support Community Welfare

Students from DMNH, IPB University participated in this program through a community group empowerment project to support community welfare in Pedekik Village, Wonosari Village, and Sekodi Village, Bengkalis Regency, Riau from October to December 2021. The benefit from this program is that students get material, social empowerment from professionals, field experience, especially in environmental aspects, networking and mentorship with CSR and BRGM experts, a CEO certificate of social empowerment, and accommodation and transportation. In addition, the community also benefits through agricultural and livestock training activities and training to increase the added value of village-only commodities.



## IPB Vocational School Students Demonstrate Augmented Reality - Based 3 - Dimensional Interactive Work

Students from the IPB University Vocational School, Shinta Erma Ferra, and Indah Salsabila participated in demonstrating Augmented Reality-based three-dimensional interactive work. This work serves as educational material for local food consumption, local fruits, and vegetables as well as an invitation to plant from an early age. The student's current technological work was produced in collaboration with the guidance of lecturers Nur Aziezah, MSi, Amata Fami, MDs, and a team from BBP2TP namely U Humaedah, MSi, and Elya Nurwullan, MSi.

The innovation is an Arduino-Based Hydroponic Technology innovation and Local Food Education. The Taman Agroinnovation team included Didu Wahyudi, MSi, Tika Tresnawati, MSi and Hatyanta Nuha Pradipta, SST was sent to demonstrate the urban farming technology.

This Smart Farming technology allows a tool that can measure and view the pH and nutritional values of hydroponic systems. Arduino can make the system automatic, the pH sensor functions as pH measurement, the TDS sensor is a tool for measuring nutritional values and a 20x4 LCD is used to view pH and nutritional values. "So when the pH value and nutrients decrease, Arduino will automatically run the pH or TDS sensor to turn on the pH or nutrient pump. When the pH and nutrient values are appropriate, the pH and the nutrient pump will stop. With this system, the work of officers is more efficient," said Didu Wahyudi. The work was demonstrated at The 3rd International Conference on Agricultural Postharvest Handling and Processing, 12/10





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# Research, Innovation, and Bussiness

## Their Matching Fund Program: Commercialization of Plant Growing Media from Zeolite "Zeoponic" Materials at CV Transindo Citra Utama

Since the issuance of Government Regulation (PP) No. 1/2014, which is a derivative of Law no. 4/ 2009 concerning Minerals and Coal, mining materials, including zeolite, may not be exported in the form of raw materials must first be processed into semi-finished goods or finished goods. The zeolite needs to be modified into finished goods to solve the problem above, namely Zeoponic planting media. To make zeoponics one of the superior products, collaboration is carried out between the Center for Mine Reclamation Studies, the Department of Soil Science, and Land Resources of IPB University with CV Transindo Citra Utama. This activity consists of 4 steps: (1) conducting zeoponic trials with the formulas of IPB University research results on various types of horticultural vegetables, flower/ornamental plants, and plantation and forestry plant nurseries; (2) Field trials and formulation improvements, especially the amount and type of fertilizer; (3) Socialization of zeoponics to groups of flower/ornamental plant entrepreneurs, horticultural plant farmers, and plantation plant nurseries; (4) Developing zeoponic sales through online platforms. This activity is in synergy with the MBKM internship program and final project research, involving ten undergraduate students from the Land Resource Management Study Program, Faculty of Agriculture, IPB. The results of the research in the greenhouses of the Department of Soil Science and Land Resources of IPB and the fields in Cisarua, Sukamantri, and Cipaku showed that horticultural crops, flower plants, and plantation and forestry plant seeds grown on zeoponic media gave better growth compared to some media that purchased in the market and also media commonly used by farmers in the field.



This shows that zeoponic media supports plant growth better. Socialization of zeoponics has been carried out to several farmer groups for vegetable flowers, as well as farmer groups for plantation and forestry plant nurseries, respectively in Ciawi, Sukamantri, Cipaku, and Pangalengan. Input from farmers is beneficial for improving the growing media for zeoponic plants, one of which is the challenge of making flower plant media that can maintain the "Variegata" nature, namely the condition of the leaf color, which is usually green and produces other shades, starting with gradations of white, yellow, pink, and green. Through online marketing, including the developed e-commerce, Zeoponic on Tokopedia, and Shopee. As of December 3, 2021, 216 bags have been sold. Achievement of performance indicators, among others, in addition to 133% internship students (target 3 was achieved by 4 students because there was an additional 1 student during this activity), 3 lecturers doing off-campus activities (DUDI), 2 international publications in the proceedings indexed by Scopus, 2 Intellectual Property Rights that have been awarded registered in the form of 1 patent and 1 Zeoponic trademark. The obstacles experienced were technical, such as the condition of the greenhouse temperature, which was too high, so a fan was needed to overcome it during the study (24/06/2021-31/12/2021)..

# 10

## Feasibility Study Of Pellet Production From Fruit Processing Waste As Boiler Fuel

The aim of this study are 1) to develop pellet products from fruit processing industry waste (sludge and fruit fiber) as a bioenergy source of boiler, and 2) to analyze pellet characteristics covering caloric values, water content, volatile content, bounding carbon content and ash content. The results of study showed that pellet products was successfully produced as energy source for boiler. This research contributes for industry efficiency, for value added of industry waste.



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# Prevalence and Profiling of Salmonella Contamination in Chicken Carcasses and Identification of Critical Control Points in The Process Chain as an Effort of Control

Indonesia is listed as one of the countries with the highest incidence of endemic salmonellosis in Asia after China and India. *Salmonella* spp. contamination in Indonesian chicken carcasses is listed as one of the countries with the highest incidence of endemic salmonellosis in Asia after China and India. *Salmonella* spp. Contamination in chicken carcasses can occur due to contamination before the chicken can occur due to contamination before or after the chicken is cut or after the chicken is cut. The benefit of this research is to develop a method for detecting *Salmonella* in chicken carcasses that supports a safe and nutritious food quality improvement program (02-09/2021)



## IPB University Vocational School Collaborates with BBPPMPV Business & Tourism and Agriculture

IPB University Vocational School collaborates with the Center for the Development of Quality Assurance for Vocational Education (BBPPMPV) for Business & Tourism and Agriculture in Cianjur. The signing of cooperation agreement was carried out on March 24th at IPB University Vocational School, Bogor.

Dean of IPB University Vocational School, Dr. Arief Daryanto, Head of BBPPMPV Business and Tourism, Sabli, SH, MH, and Head of BBPPMPV Agriculture, Dr. Raden Ruli Basuni attended this activity directly. Dr. Arief Daryanto said, "we have to raise the prestige of agriculture, agriculture is very much needed in relation to food security such as food security, food safety, and food defense used by develop nations. During COVID-19 pandemic, if food security is not strong, it will collapse, it is time to back to agriculture. With a touch of organization, technology, and innovation, agriculture can produce more", he said.

Dr. Arief is confident that this collaboration will further strengthen Vocational Education to Strengthen Indonesia. Sabli, SH, MH said this program was indeed one of the planned programs. According to him, Balai Besar Dispar should find as many partners as possible. Starting from internal partners such as IPB University vocational schools, which are both under the auspices of the Ministry of Education and Culture, as well as industrial partners in accordance with their respective expertise programs.





# Synthesis of Healthy Vegetable Oil Diacylglycerol (DAG) from RBDP Olein by Enzymatic Glycerolysis and Addition of Stanols to Lower Blood Cholesterol and Triglycerides

Commercial edible oil which is a derivative product of palm oil generally has a structure in the form of triacylglycerol (TAG), this compound has an adverse effect on the body such as obesity. Meanwhile, oil in the form of DAG (diacylglycerol) can act as a healthy oil because DAG oil does not promote obesity and instead poses positive effects on human body. The benefit of this research is obtaining synthesis and purification method that will generate highest DAG fraction percentage as well as the physical and chemical properties of the product (2020-2022)

## PEMURNIAN MINYAK DIASILGLISEROLL (DAG) DARI REFINED BLEACHED DEODORIZED PALM OLEIN

## PURIFICATION OF DIACYLGLYCEROL OIL (DAG) FROM REFINED BLEACHED DEODORIZED PALM OLEIN

Sari Apriliana<sup>1\*</sup>, Nur Wulandari<sup>2</sup>, Puspo Edi Giriwono<sup>3</sup>,

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### ABSTRAK

Dalam industri lemak dan minyak di dunia sekarang ini produk yang sangat menarik ialah diasilgliserol (DAG). Klaim DAG sebagai minyak sehat meningkatkan minat masyarakat untuk mensubstitusi minyak masak komersial dengan minyak DAG, hal ini juga menarik minat peneliti untuk mencoba mensintesis DAG secara pendekatan kimia atau enzimatik dengan berbagai metode. DAG diastereoisomer melalui modifikasi struktur lemak dan minyak konvensional. DAG keluar dalam tiga stereoisomer, namun DAG dengan bentuk sn-1,3-DAG menunjukkan potensi menekan penumpukan lemak tubuh dan menurunkan kadar triasilgliserol, kolesterol dan glukosa. Proses sintesis minyak DAG dengan enzimatik tentunya tidak dapat menghasilkan persentase DAG dalam jumlah yang tinggi secara langsung. Oleh karena itu diperlukan beberapa perlakuan untuk mendapatkan komposisi DAG yang lebih tinggi, salah satunya pemurnian dengan pelarut. Tujuan penelitian ini ialah untuk memberikan informasi tentang metode sintesis dan metode pemurnian yang tepat untuk mendapatkan minyak dengan persentase fraksi DAG tertinggi serta mengkaji sifat fisik dan kimia produk. Penelitian sintesis minyak DAG dan RBDP Olein menunjukkan fraksi DAG terbaik ialah produk dengan proses pemurnian dengan NaOH 10% ini memiliki karakteristik visual kekentalan lebih rendah, berbau minyak, dan berwarna putih. Sifat fisiko-kimia lainnya dari produk ini antara lain kadar air 1,00%, bilangan peroksidasi 3,93 meq/kg, bilangan iod 54,68 g/100g, kadar asam lemak bebas 8,80%, BSA lebih 33,6 °C.

**Kata kunci:** diasilgliserol, enzimatik, kolesterol, pemurnian, triasilgliserol

### ABSTRACT

The fats and oils industry in the world a product which has a great interest is diacylglycerol (DAG). Diacylglycerol has been reported by several researchers give good effects on health. DAG has been a research topic that is of great interest due to its various functionalities in the lipid system beside health benefits. The claim of DAG as a healthy oil has increased people's interest to substitute commercial cooking oil with DAG oil, and this has also attracted researchers interest to try synthesize DAG with chemical approach or enzymatic approach by various methods. DAG is synthesized by modifying the structure of conventional fats and oils. DAG comes out in three stereoisomers, but DAG sn-1,3-DAG demonstrated to have potential in suppressing body fat accumulation and lowering triacylglycerol, cholesterol, and glucose level. DAG has been applied in various food products as emulsifier, cooking oil, and functional ingredients in various fat-based products. Substitution of DAG in food products not only give a good effect on health but also improve the sensory quality of these products, such as the use of DAG in bakery products. Even though it is claimed to be a healthy oil there are several drawbacks and safety risks from using DAG that occur by DAG products that are exposed to high temperature exposure which causes the formation of GE (glycidyl esters) and 3-MCPDE (3-monochloropropane-1,2-epoxy fatty acid esters). This article aims to provide an overview of synthesis methods, health benefits, deficiencies, application of diacylglycerol (DAG) in the food system.

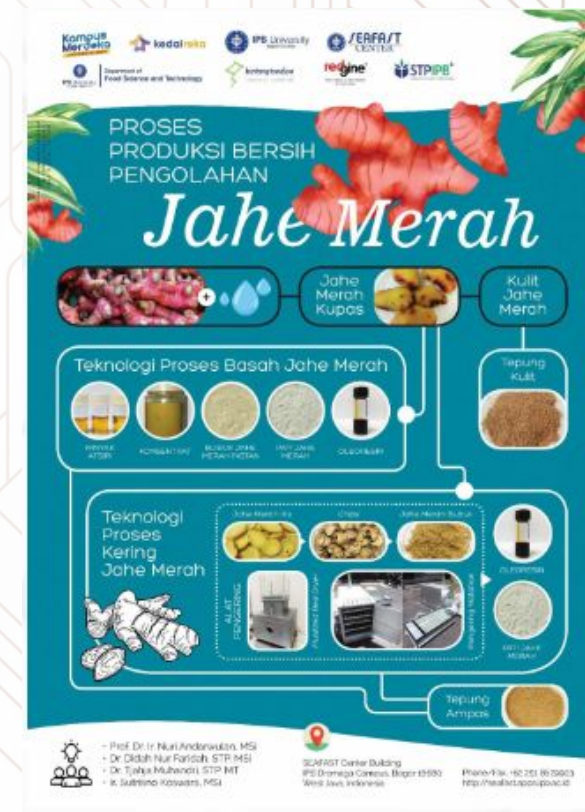
**Keywords:** diacylglycerol, cholesterol, enzymatic, purification triacylglycerol

## Clean Production Of Red Ginger Drink

The wet processing of red ginger has been used for the production of essential oils through distillation of red ginger dregs. The utilization of the filtrate from pressing of grated red ginger yet to be fully optimized. This filtrate can actually be processed to produce commercially valuable starch, concentrate and instant red ginger powder. SEAFAST Center in collaboration with PT Bintang Toedjoe develops comprehensive processing technologies for the production of various ginger products. The benefit of this research is obtaining technology to process red ginger products starting from handling of fresh red ginger to production of different red ginger products with better quality standard.

Time : August 4th– December 31th, 2021

Location : SEAFAST Center, Pilot Plant, and some regions in Indonesia (Bogor, Trenggalek and Purworejo)



## Research about Challenge Test for Custard Cream Product

Processed low-acid foods that are hermetically packaged and stored at room temperature must be proven to have conditions that can inhibit the growth of *C. botulinum*. This study collaborates with PT Sonton Food Indonesia to demonstrate that these food safety requirements are met through a challenge test activity using these bacteria or their substitutes (surrogate). The benefit of this activity is to obtain a test protocol for the inhibition of the growth of pathogenic *C. botulinum* on custard cream products through a challenge test using substitute bacteria. This activity held on SEAFast Center laboratorium (01-12/2021).

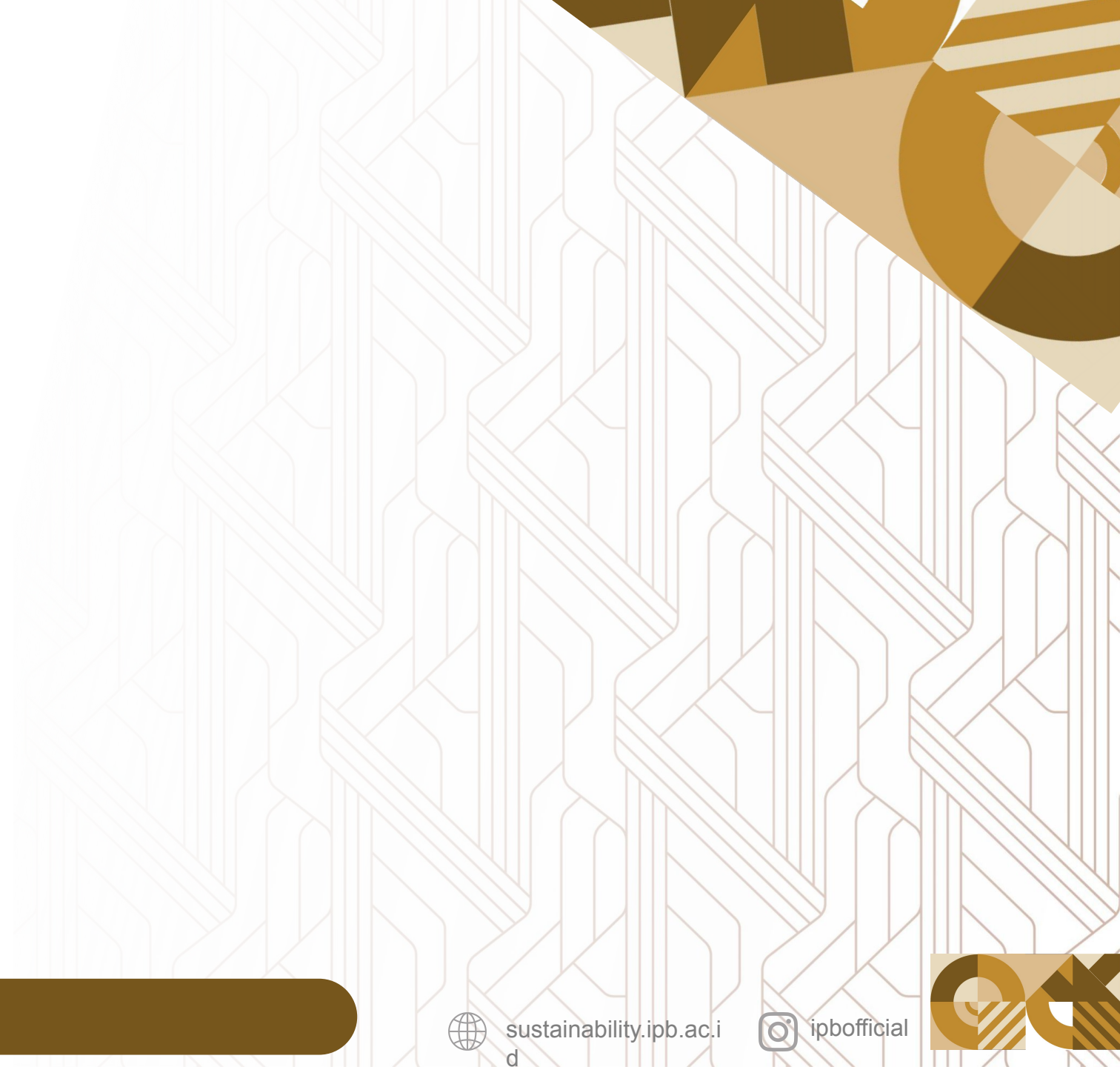




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# Campus Operation



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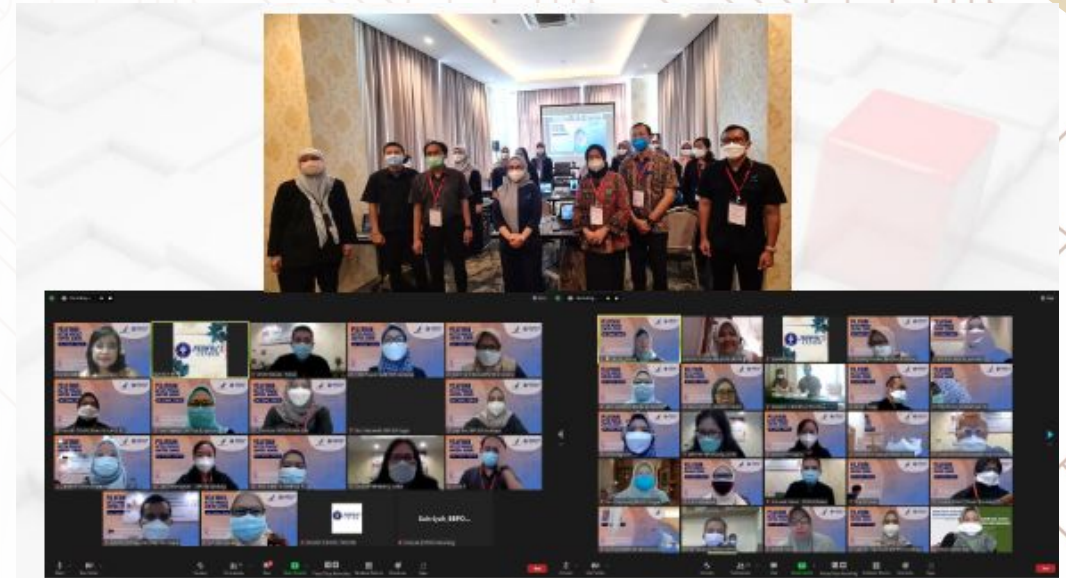


# Community Engagement

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## In House Training Better Process Control School (BPCS)

The Better Process Control School (BPCS) aims to control food with a high risk of non-acidified and acidified products, all of which are processed using a thermal process. SEAFast Center, as a partner school of the Grocery Manufacturer Association-Science and Education Foundation (GMA-SEF), provided BPCS training and Measurement of the Sufficiency of Thermal Processes to 15 food inspectors from the Indonesian National Food and Drug Administration (BPOM RI). The benefit of this activity is the increased knowledge and skills of food inspectors on a par with USFDA officers in carrying out supervision. This activity held at Hotel Savero Style, Bogor (27/09/2021-01/10/2021).



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## Training on Food Safety of Catering Servicess

Food producers need to make efforts to prevent food contamination at each food chain level by implementing a Food Safety Management System (FSMS). FSMS is described as a pyramid with the application of hygienic sanitation as a basic prerequisite and HACCP (Hazard Analysis Critical Control Point) as the culmination. To be able to develop HACCP documents, it is necessary to improve the competence of the personnel in that area. The benefit of this activity is that participants gain knowledge about HACCP-based food safety management system proven by a nationally recognized certificate of competence. Its held at SEAFast Center (31/05/2021-04/06/2021 and 07-11/06/2021).





## Monitoring and Evaluation of Reclamation in 2021: PT. Amman Mineral Nusa Tenggara

Ex-mining land reclamation activities mandated by law include Law no. 32/2009 concerning Environmental Protection and Management is one of the obligations that must be carried out by IUP holders, including PT. Amman Mineral Nusa Tenggara (AMNT). The implementation refers, among others, to the Decree of the Minister of Energy and Mineral Resources No. 1827 K/30/MEM/2018 concerning Guidelines for the Implementation of Good Mining Engineering Rules. The monitoring and evaluation survey will be carried out **on October 10, 2021**. The output of the activity is in the form of a report, and a scientific publication is planned. Components of soil fertility and erosion potential significantly affect microclimate conditions and flora diversity. It increases the quality of flora diversity, which will invite the presence of fauna. Thus, periodic environmental monitoring of the components of soil fertility, microclimate, potential erosion rate, and flora diversity is expected to be used as an evaluation material to prevent potential land damage from an early stage and achieve the success of ex-mining land reclamation, at least following the demands of the regulations and laws that apply. valid (02/08/2021-31/12/2021).



## Berau Coal Green Mining System



PT. Berau Coal, in its mining operations, applies the concept of environmentally friendly mining, namely the "Berau Coal Green Mining System" (BeGeMs). To use the idea PT. Berau Coal continuously monitors and manages the environment, especially microclimate conditions, soil fertility, erosion potential, revegetation success, and fauna in the revegetation area. The soil fertility monitoring survey was carried out from 31 October to 16 November 2020 in three mining operation areas: Lati, Sambarata, and Binungan. All three are included in the administrative area of Berau Regency, East Kalimantan. The purpose of conducting environmental monitoring for the component of soil fertility in the revegetation area of PT. Berau Coal is to know; (a) physical, chemical, and biological characteristics of the soil at each reclamation site as a reference in post-mining land revegetation activities, (b) soil fertility level at each location (plant age class), (c) recommendations for improving soil fertility, (d) recommendations for the suitability of vegetation to be carried out at each site, and a map of the distribution of soil fertility at each location (plant age class).

The monitoring methodology is carried out by taking soil samples, both in the form of intact soil samples and disturbed soil samples, observing fauna and calculating vegetation, measuring microclimate parameters and erosion. As of the time this SDG's report was made, this activity was still ongoing. The planned activity outputs are scientific reports and publications. The results of soil chemical analysis at the Lati site showed that the level of soil fertility at the Lati site was low. However, there had been a recovery of soil organic matter in the topsoil along with the increasing age of revegetation plants. Some soil quality parameters at the Sambarata site are better than those at the Lati and Binungan sites. The soil condition in the Sambarata revegetation area is better than the soil in the natural forest arboretum. The Binungan site has these physical properties that are not much different from those on forest land. The microbiological activity in several locations seems to exceed the microbial activity in natural forests, which shows a trend of improving soil quality in the revegetation area from a microbial perspective. (02/11/2021-02/04/2022)

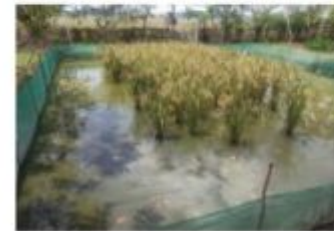
## Perumda Tirta Pakuan Bogor Customer Satisfaction Survey

In 2021, for the third time, SB-IPB was again trusted by Perumda Tirta Pakuan Bogor City to conduct a customer satisfaction survey. The customer satisfaction survey of Perumda Tirta Pakuan Bogor City in 2021 is generally intended to provide a basis for consideration and reference in planning and decision making aimed at increasing customer satisfaction. Evaluation and input from customers are expected to give an overview of the needs of the people of Bogor City for the services of Perumda Tirta Pakuan. The customer satisfaction survey activity of Perumda Tirta Pakuan was carried out from August 19 to November 16, 2021. The survey was conducted in a hybrid manner (online and offline) through structured questionnaires to customers spread into six work zones, with a total of 2263 respondents who were customers of Perumda Tirta Pakuan. On December 1, 2021, a press conference was held on the results of the 2021 Perumda Tirta Pakuan Customer Satisfaction Survey, Bogor City, at the Bogor Restaurant Spice Rain. The press conference was attended by the research team from the Bogor Agricultural University School of Business (SB IPB) and representatives from the management of Perumda Tirta Pakuan Bogor City. The results of the 2021 Perumda Tirta Pakuan Customer Satisfaction Survey show that the Customer Satisfaction Index (IKP) for product services has a value of 80% and is included in the PUAS category, while the IKP for services has a discount of 79% and is also included in the PUAS category.



## Karawang Working Work Program, Healthy Farmers Spirit, Increasing Food Security (Footwear)

The Karawang Hard Work Program, Healthy Farmers Spirit, Increased Food Security (JEJAK SETAPAK) is a program to empower farming communities through organic farming models to produce safe, healthy food environmentally friendly. This program is part of the CSR assistance of PT Pertamina EP Zone 7 Subang Field in collaboration with CARE LPPM IPB. The JEJAK SETAPAK program has been implemented since 2019 until now. The location is focused on Plawad village, East Karawang sub-district, Karawang district. The condition of rice fields in the Karawang Regency is increasingly damaged due to the farmers' habit of using chemical fertilizers and pesticides, so this program carries the concept of intensifying healthy agriculture. The group involved in this program is the Saripati Tani Association, with 46 members consisting of 37 farmers and nine youths.



# 22

## Training on Indonesian Snack Production: Amplang, Opak, Kerupuk, etc.

“Kerupuk“ or crackers are traditional Indonesian product that is timeless and highly sought-after. Some regions have their own signature cracker products, such as amplang, kemplang/ fish crackers, klanting, opak etc. The high number of consumers serves as a great opportunity for Food SMEs to gain income from this products. The benefit of this activity is to train Food SMEs about the manufacturing techniques and critical points that affect the quality of the crackers. (28/08/2021)

Time : August 28nd, 2021

Location : Online



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## Training on Making Dairy Fermentation Products

The public heavily consumes fermented dairy products. However, nearly all of these products are produced by big industries. Home industries can also make their dairy fermented products with the proper techniques. The benefit of this activity is that it trains food SME producers to produce fermented dairy products. (11/09/2021)



## Production of Healthy, Quality, and Profitable Processed Food with Palm Oil

Palm oil and its derivative products cannot be separated from the daily food consumption of the Indonesian people, with very wide applications. Various information related to palm oil health issues have circulated in the community. The emergence of a negative palm oil campaign trend through the issue of "no Palm oil and its derivative products cannot be separated from the daily food consumption of the Indonesian people, with very wide applications. Various information related to palm oil health issues have circulated in the community. The emergence of a negative palm oil campaign trend through the issue of "no palm oil labeling". The purpose of this activity is to provide information to the public about the role of palm oil in food products and its impact on health, as well as its relation to the development of a false trend regarding "no palm oil labeling"; through interactive activities with a format that is tailored to the audience or target. (13/11/2021)



## Production Training and Functional Marketing Chocolate Praline

IPB University Vocational School Lecturers provide training Production and marketing of functional Chocolate Praline for housewives and young women in the village East Cilebut, Sukaraja District, Bogor Regency. This activity is part of the Lecturer program Subserve. This program is attended by at least 15 people housewife and 5 young women. Activity involving three lecturers, namely Andi Early Febrinda, CC Nurwitri, and Made Gayatri Anggarkasih





## IPB University Lecturer Holds Waste Management Training for Maggot Cultivation as Alternative Catfish Feed

Several lecturers of the Vocational School of IPB University participated in the Serving Lecturer Program, (5/9). In this program, Andri Hendriana, SPi, MSi, lecturer of the Production Technology and Management of Aquaculture Study Program provides training on waste management to residents of Margajaya Village, West Bogor District.

"Efforts to process organic waste from households can be used as a medium for maggot cultivation. Vegetables and food scraps are chopped and given an attractant in the form of fish meal, which has a great chance for maggots to grow," said Andri.

According to Uding Sastrawan, SP, MSi, maggot or Black Soldier Fly (BSF) fly larvae contain high enough protein for alternative fish feed ingredients. To get a maggot does not require high technology and the price is relatively cheap.

"The use of maggot as an alternative feed in catfish cultivation from various studies can replace up to 50 percent of commercial feed. This method is very beneficial for catfish farmers. The use of maggot can reduce feed costs so that business costs can be more efficient," said this Lecturer of the Agribusiness Management Study Program, Vocational School of IPB University.



## Train MSMEs Using the Glutenif 1.0 Application

Several IPB University lecturers from the Vocational School participated in the Serving Lecturer activity. This time they provided training for Micro, Small and Medium Enterprises (MSMEs) in Bogor Trade World, Bogor City. There are about 50 MSMEs who take part in this activity. "We, lecturers from the Informatics Management Study Program, Food Quality Assurance Supervisor, and the Computer Engineering Study Program of the Vocational School of IPB University provide training on the use of the Gluten 1.0 application for MSMEs in Bogor. This training aims to make it easier for MSME actors to identify gluten information in food products," said Medhanita Dewi Renanti, SKom, MKom as Team Leader. Medhanita added that the current era does not yet have an effective and efficient platform to display comprehensive gluten information, product recommendations, and order low gluten or gluten free products. This is based on her experience of having difficulty finding suitable gluten free products, and the variations of these products.



IPB University lecturers from Vocational Schools provide training on Good Food Production Methods for Home Industry (CPPB- IRT) and Halal to owners and employees of the Home Food Industry (IRTP) Sisuka Snack, Cake and Cookies, Cimahpar Village, Bogor City, a times ago. This activity aims to equip IRTPs with knowledge about CPPB-IRT and Halal in order to increase the competitiveness of IRTPs in producing safe and quality food products. to produce quality and safe food, IRTPs must apply good food production methods.



## Lecturer Serving IPB University provides Waste Utilization Training

The Lecturer Service Program Team at IPB University 2021 held counseling and training about waste utilization to have economic value. This counseling and training were conducted in Cihideung Ilir Village, Ciampea District, Dramaga, Bogor. The Head of the Lecturer Service Team, Dr. RA Hangesti Emi Widyasari, said, "Domestic waste will eventually become a problem if we don't care about it, but how can we utilize this waste to become economically valuable by making organic liquid fertilizer that can be used for agricultural land in general."

Furthermore, the IPB University lecturer explained that the activities were supported by the Institute for Research and Community Service (LPPM) of IPB University. Not only that, but this activity also partnered with 77 blessing.com. The lecturers from the Vocational School of IPB University who participated in this activity were Ir Nurul Jannah, Ph.D., Asty Khairi Inayah Syahwani, SStat, MM, MSM, and Lesia Fatma Ginoga, MSi.

Furthermore, Dr. Hangesti conveyed that there are agricultural potentials in the Cihideung Ilir area that hasn't been fully exploited. She admitted that in this village, there had been many programs that have been carried out, but there are some programs that haven't worked, although there are also programs that have been successfully implemented. "We hope that this activity can run well and the community will start to increase their awareness of the environment. In addition, waste management to improve environmental health and generate economic value is also a particular concern," she said.





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