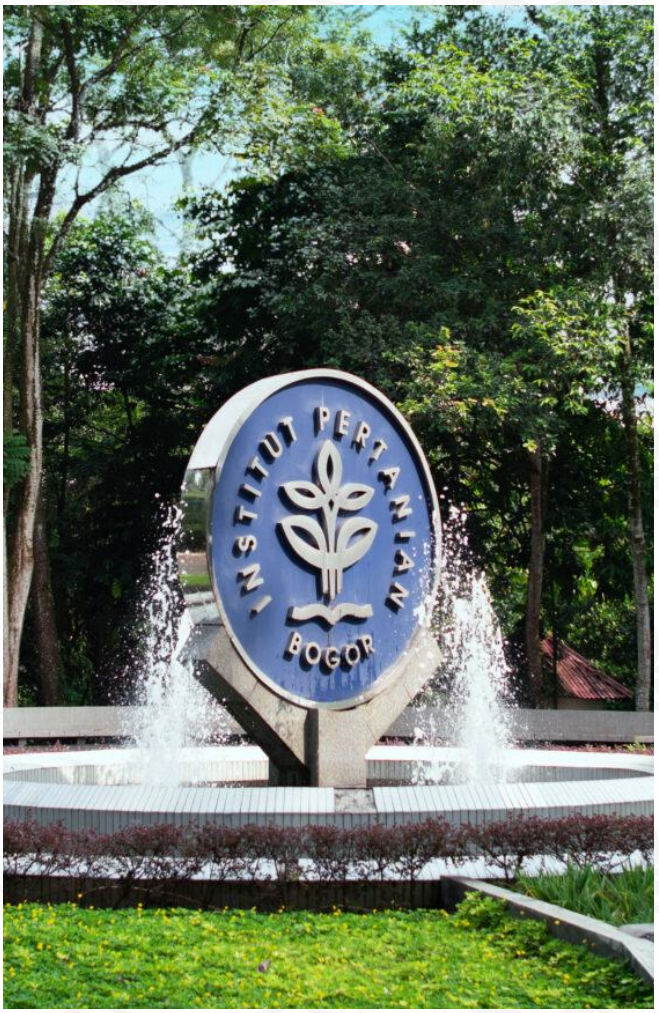
IPB University
Bogor Indonesia

SUSTAINABLE DEVELOPMENT GOALS



IPB UNIVERSITY
SUSTAINABLE DEVELOPMENT GOALS
SDGs Report 2025



Book Titles:

SDGs Report 2025:
Supplementary Report

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GLOSSARY

A

ASIIN : Accreditation Agency for Study Program in Engineering, Informatics, the Natural Sciences, and Mathematic

B

BAN-PT : Badan Akreditasi Nasional Perguruan Tinggi (National Accreditation Board for Higher Education)

BRIN : Badan Riset dan Inovasi Nasional (National Research and Innovation Agency)

H

HIMITEPA : Himpunan Mahasiswa Ilmu dan Teknologi Pangan (Student Organization of Food Science and Technology)

K

Kemendikbudristek : Kementrian Pendidikan, Kebudayaan, Riset, dan Teknologi (Ministry of Education, Culture, Research, and Technology)

KKN : Kuliah Kerja Nyata (Thematic Students Community Service Program)

L

LAM-PTKes : Perkumpulan Lembaga Akreditasi Mandiri Pendidikan Tinggi Kesehatan Indonesia (Indonesian Accreditation Agency for Higher Education in Health)

M

MPASI : Makanan Pendamping ASI (Weaning food)

P

PKM-K : Program Kreativitas Mahasiswa - Kewirausahaan (Student Creativity Program - Entrepreneurship)

S

SMKN : Sekolah Menengah Kejuruan Negeri (Vocational high school)

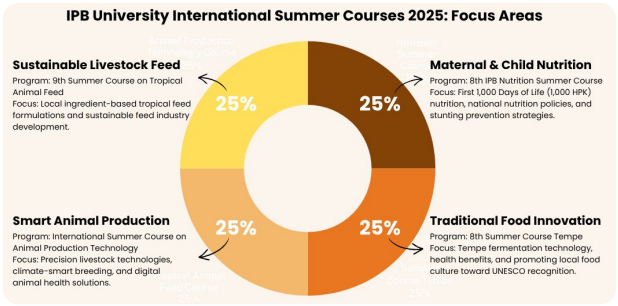


#31

THE Impact Rating 2025
pada kategori TPB 2
THE Impact Rating 2025 in SDG 2 category

End hunger, Enhancing Nutrition, and Advancing Sustainable Agriculture

Learning Program



As part of its broader commitment to advancing food and nutrition security through education, research, and international collaboration, IPB University offers international summer courses that provide students with opportunities to deepen their knowledge and develop practical skills. In 2025, four summer courses hosted by the departments of nutrition, food science, and animal science brought Indonesian and international students together with experts from academia, government, and industry. The programmes centred on three themes: maternal and child nutrition, traditional food innovation, and sustainable livestock production.

Department of **Community Nutrition, Faculty of Human Ecology** hosted The 8th IPB Nutrition Summer Course 2025 The summer course focused on maternal and child nutrition during the First 1,000 Days of Life, the period from pregnancy to a child's second birthday. Through interactive lectures, practical sessions, and institutional visits, participants examined Indonesia's nutrition policies and intervention programmes. They also explored the roles of international organisations and the food industry in improving maternal and child nutrition.

Department of Food Science and Technology organised The 8th Summer Course Tempe: Indonesian Cultural Heritage for the World. This summer course is already organised annually since 2017. The 2025 edition was held in person from 30 June to 5 July at IPB University and Rumah Tempe Indonesia. Participants studied the history of tempe, its fermentation technology, the microbiological and biochemical changes during fermentation, and its health benefits. Sessions also covered industrial-scale product development and tempe entrepreneurship abroad. Participants then produced tempe from scratch and prepared traditional tempe-based dishes. The programme supports Indonesia's effort to have tempe recognised by UNESCO as Intangible Cultural Heritage and promotes tempe as an affordable, protein-rich food.



Additionally, The 9th Summer Course on Tropical Animal Nutrition and Feed Technology, held from 10 to 25 July 2025 under the theme Sustainable Livestock Production: Exploring Nutrition, Innovation, and Conservation, the course covered tropical animal nutrition, local feedstuff innovation, and sustainable feed industry development. Expert lectures were combined with feed formulation training and field visits.

298 participants from **62** universities **12** countries



International Summer Course 2025 on Animal Production Technology. Shortly afterwards, The Department of Animal Production Technology, Universitas Sumatera Utara, and Universiti Putra Malaysia collaborated to organise **The International Summer Course on Animal Production Technology from** 28 July to 1 August 2025. It attracted 298 participants from 62 institutions in 12 countries. Participants explored precision livestock technologies, sustainable feeding, climate-smart breeding, and digital solutions for animal health and productivity.

2 Research and Innovation



IPB University develops research-based innovations to address challenges across the food value chain, including crop breeding and local food processing. Through collaboration with industry partners, IPB supports the application of these innovations to improve agricultural practices and food production in order to benefit both farmers and consumers.

At its 2025 Innovation Launch in May, IPB University introduced four **New Type Rice (Padi Tipe Baru, PTB) varieties.** They were developed by Prof Hajrial Aswidinnoor and Dr Willy Bayuardi Suwarno of the Department of Agronomy and Horticulture, and officially released by the Minister of Agriculture in November 2023. In multi-location trials at 11 sites across Indonesia, the varieties reached yield potentials of 10.16–11.78 t/ha, with average yields of 7.97–8.45 t/ha. All four showed resistant to moderately resistant reactions to four races of blast disease, to which the national check varieties were susceptible. They also showed resistance to the brown planthopper.

IPB PTB Varieties: Tailored Innovations for Distinct Needs

IPB 12S & IPB 13S
(PREMIUM MARKET FOCUS)

- **Key Data:** Head Yield 96% (12S) & 95% (13S)
- **Key Trait:** Soft (Pulen) Texture (disertai label 'Texture')
- **Benefit:** High-Yield Premium Commercial Rice

IPB 15S
(NUTRITION & AGRONOMIC RESILIENCE FOCUS)

- **Key Data:** High Iron & Zinc Content
- **Key Trait:** Anaemia & Stunting Reduction, Resource-Limited Adaptability
- **Benefit:** Thrives on Moderate-Low Fertility Soils

IPB University also promotes food system resilience through local resources. Researchers developed functional cassava-based products, notably Chocoferin healthy cookies. By transforming an underutilised local root crop into nutritious, value-added food, this work supports national food diversification and reduces reliance on imported wheat.

IPB alumni also carry research into enterprise. Koes Hendra, a graduate of the Faculty of Animal Science, founded SJFeed, a cattle feed developed from mealworm-farming by-products. The company reports that the feed can increase daily weight gain by up to 1.3 kg. SJFeed holds a feed registration number from the Ministry of Agriculture, complies with the Indonesian National Standard (SNI), and operates factories in Bogor and Temanggung.

Research in Number

1,277 scholarly output in 2021-2025

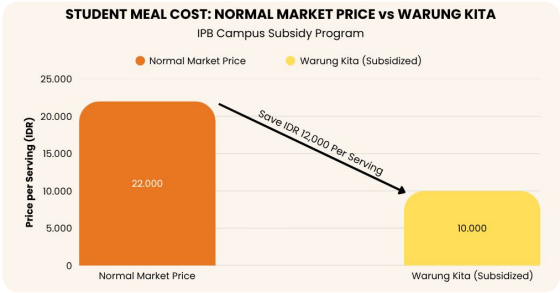
0.97 FWCI in 2021-2025

7,124 citation count in 2021-2025

9.33% of all Indonesian citation count

9.85% of all Indonesian scholarly output

3 Campus Operations



Subsidized Canteen Programme (warung kita). Throughout 2025, IPB University continued to **provide affordable meals for students** through its subsidized canteen programme, known as Makan Kenyang, Harga Ringan (a filling meal at an affordable price). Students can purchase a complete meal of rice, vegetables, and protein only for Rp 10,000 (USD 0.56). By offering nutritious meals at a reduced price, the programme helps students meet their daily dietary needs while reducing the financial burden of food expenses, particularly for those from lower-income backgrounds.



IPB University also has the Free Fruit and Milk Programme. This programme **provides students with a morning package of fresh fruit and milk every** weekday, Monday to Friday. In 2025, it expanded beyond the main Dramaga campus to students at the Cilibende and Sukabumi campuses, extending nutritional

support across IPB's multi-campus community. A daily serving of fruit and milk helps students meet part of their micronutrient and protein needs and reinforces a campus culture of balanced nutrition.

IPB University also addresses food insecurity among its students through the Free Meal for Students in Need Programme, supported by IPB alumni from Classes 18 and 19. Throughout 2025, **the programme provided meal packages** every weekday to active students who require food assistance, reflecting the strong solidarity within the IPB community and its shared commitment that no student should go hungry.



Beyond improving access, IPB University also addresses how food is used once it reaches the table. The university has measured campus food waste since 2019 using a method based on the Indonesian National Standard SNI 19-3964-1994. In 2025, this effort was reinforced by the Aksi Zero Food Waste campaign, part of the **Sustainable Solution Champions (SSC) movement initiated by Dr Rina Mardiana.** The campaign was piloted at Kantin Sapta and Kantin Plasma over eight days, from 20 to 27 October 2025. Student volunteers educated diners and canteen vendors on responsible consumption and weighed and recorded leftover food each afternoon following the same SNI-based method. The campaign also encouraged students to understand how organic waste can be utilised, including through maggot-based processing as practised at Taman Semangat, the waste management site on the Dramaga campus. Starting with 350 students, the SSC movement aims to turn food-waste awareness into lasting individual habits.

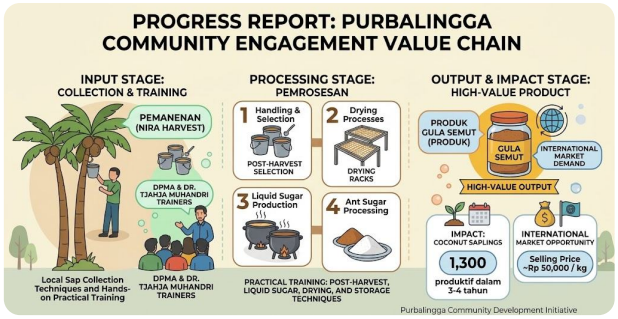
4 Community Engagement

IPB University extends its commitment to food security beyond campus by working directly with farming communities, industry partners, and civil society. In 2025, this engagement focused on two priorities. The first was building the technical and entrepreneurial capacity of smallholder farmers, in line with SDG Target 2.3. The second was raising public awareness of food loss and waste as part of a more resilient food system.

Under the Desa Sejahtera Astra (Astra Prosperous Village) programme, a **partnership with PT Astra International, IPB University** provided avocado cultivation training to farmers in Guci Tourism Village, Tegal Regency, Central Java, in September 2025. The participants came from four villages (Guci, Batumirah, Tuwel, and Rembul) and already grew avocados, but lacked access to cultivation techniques suited to their highland conditions. To address this gap, IPB invited Sigit Pramono, an avocado cultivation practitioner, as the main trainer. He introduced the top-working technique, which grafts superior varieties onto mature but less productive trees, and recommended the Hass and Miki varieties as best suited to Guci's cool climate.



As a follow-up within the same programme, IPB's Directorate of Agromaritime Community Development (DPMA) held an avocado nursery training on 13 November 2025 for 20–25 farmers from IPB-assisted villages in Tegal. Sigit Pramono again served as a trainer, focusing on grafting and seedling production. The session addressed the farmers' remaining difficulties in rootstock selection, grafting, and seedling care. The training aims to equip farmers to run their own seedling businesses independently and sustainably, creating a new source of income for their villages.



IPB University has helped farmers in Purbalingga Regency **improve the value of their coconut products through practical processing training.** Organised by DPMA and led by IPB lecturer Dr Tjahja Muhandri, the programme brought together farmer groups from Pakecen and Karangjengkol villages to learn how to turn coconut sap into gula semut (powdered coconut sugar). Participants received hands-on training in post-harvest handling, product selection, drying, liquid sugar production, and proper storage. The initiative also involved local palm sugar entrepreneur Gunardi, who donated 1,300 dwarf coconut seedlings for demonstration plots near the village hall. The trees are expected to become productive within three to four years, providing

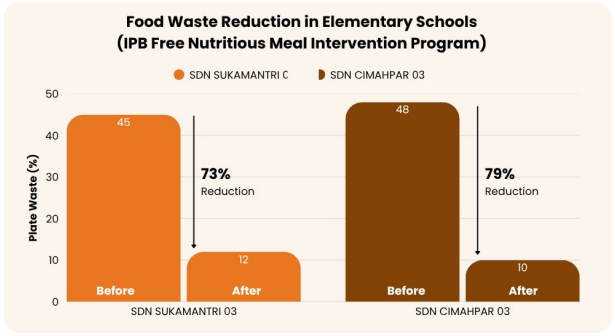
farmers with an additional source of raw materials. With coconut sugar fetching around Rp 50,000 per kilogram in international markets, the training offers farmers an opportunity to improve product quality, reach higher-value markets, and earn more from their harvests.



To raise public awareness about food waste, IPB University collaborated with Foodbank of Indonesia and Food Bank IPB to organise the national webinar Stop Food Waste in commemoration of World Food Day 2025. Hosted by Agrianita IPB University, the online event attracted more than 700 participants and brought together experts to discuss food waste and its impact on food security in Indonesia. During the webinar, IPB nutrition expert Prof. Drajat Martianto highlighted the contradiction between the large amount of food wasted and the country's ongoing struggle with stunting. He noted that food waste causes estimated economic losses of Rp 231–551 trillion annually, equivalent to 4–5% of Indonesia's GDP. Hendro Utomo, founder of Foodbank of Indonesia, encouraged communities to revive the traditional village food barn (lumbung pangan desa) as a way to strengthen local food security. Meanwhile, Dr Yusalina, head of Food Bank IPB, shared how the university's food bank helps students access food. The discussion also emphasised the role of households, particularly mothers, in reducing food waste through better food planning, preparation, and consumption.

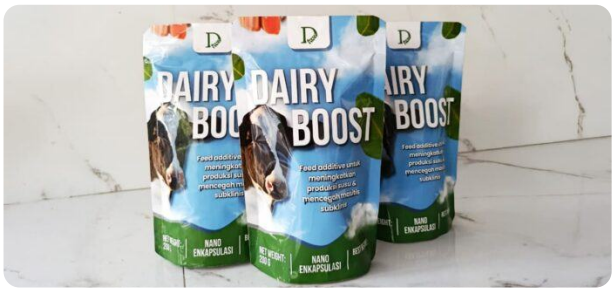
5 Student Activity

Five IPB University students from the Resource and Environmental Economics, Islamic Economics, and Actuarial Science programmes worked on reducing food waste in Indonesia's Free Nutritious Meal (Makan Bergizi Gratis, MBG) programme. Under the supervision of Dr Meti Ekayani, the students conducted a project at SDN Sukamantri 03 in Bogor Regency and SDN Cimahpar 03 in Bogor City to encourage schoolchildren to finish their meals. The team began by measuring food left on the plates of third-grade pupils over eight consecutive days and interviewing the children to better understand their eating habits. Based on their findings, they developed a simple behavioural intervention using an educational video about the importance of finishing meals and a pocketbook where pupils could collect stickers whenever they finished their food. Through this approach, the students sought to reduce plate waste while encouraging children to develop better eating habits. The project also demonstrated how simple, low-cost educational activities can help ensure that meals provided through the MBG programme are consumed and contribute to improving children's nutrition.





Students from IPB University's Nutrition and Feed Technology programme developed **Lactowaf,** a wafer-based feed designed to improve dairy cattle nutrition and milk production. Under the supervision of Prof Yuli Retnani, the team formulated the feed using protected palmitic acid and vegetable fat to improve feed efficiency and milk quality. Unlike conventional loose feed, Lactowaf comes in a compact wafer form that helps minimise feed spillage and makes it easier for cattle to consume, including animals affected by foot-and-mouth disease. The innovation offers farmers a practical feeding alternative that could help improve dairy productivity while reducing feed losses.



Another group of IPB University students developed **Dairy Boost,** a feed additive made from mature katuk leaves, turmeric, and zinc and selenium proteinate using nanoencapsulation technology. The team deliberately selected mature leaves and rhizomes that are rarely used for human consumption, allowing these agricultural materials to be used for livestock feed without competing with the human food supply.

Preliminary testing showed promising results, suggesting that Dairy Boost could increase milk production by up to 30%. The formulation also demonstrated antibacterial activity against bacteria associated with subclinical mastitis, a condition that can affect milk production and quality. These findings suggest that Dairy Boost has potential as a feed supplement to support dairy cattle health and productivity.



To help reduce food losses after harvest, an interdisciplinary team of IPB University students from five study programmes developed **ActivPax** through the Student Creativity Programme in Entrepreneurship (PKM-K). ActivPax is an active packaging paper produced from agar-industry waste and water hyacinth fibre, combined with cumin leaf extract, activated carbon, and ascorbic acid. The packaging is designed to absorb oxygen and limit microbial growth, helping preserve the freshness of perishable foods such as meat and fish. Under refrigerated conditions, ActivPax has the potential to extend food shelf life by up to seven days. By making use of materials that would otherwise become waste, the students developed a packaging alternative that could help reduce post-harvest losses while creating value from industrial and aquatic plant waste.



Through the 2025 Thematic Community Service Programme (KKN-T), IPB University students worked with local communities in several regions to improve household food security and nutrition. In Gunung Tukul Village, Ponorogo Regency, students introduced **SAYURITA (Sayur untuk Keluarga Tangguh,** or Vegetables for Resilient Families), a programme that encouraged families to grow their own vegetables at home. Held from 8 to 10 July 2025, the activities involved training housewives in basic vegetable cultivation, including preparing growing media, planting seedlings, and using organic inputs. Participants also received polybags, vegetable seedlings, and planting materials to start their own home gardens. The students returned on 24–25 July to monitor plant growth and provide further guidance. The programme helped families make better use of available household space to grow vegetables for daily consumption, potentially reducing food expenses and improving access to fresh produce.

In Manggungharja Village, Bandung Regency, another group of KKN-T students organised nutrition education activities through the Isi Piringku (My Plate) programme. The activities focused on helping mothers prepare balanced complementary foods for infants aged 6–12 months, a period when appropriate nutrition is particularly important for children's growth and development. During the **sessions, students explained the** importance of combining different food groups and demonstrated how to prepare nutritious meals using affordable, locally available ingredients such as tempeh, eggs, carrots, and leafy vegetables. Through practical cooking demonstrations, mothers learned simple ways to prepare varied meals that meet their children's nutritional needs without relying on expensive ingredients.



Meanwhile, in Situraja Utara Village, Sumedang Regency, KKN-T students introduced **GEMARAIKAN (Gemar Ramai Makan Ikan, or Loving to Eat Fish Together)** to encourage families to include more fish in their daily diets. The programme focused on promoting fish consumption as a source of animal protein to support children's growth and help prevent stunting. As part of the activities, students distributed catfish nuggets to mothers of toddlers at risk of stunting and community health volunteers (posyandu cadres). By introducing fish in a form that is easy to prepare and appealing to children, the programme encouraged families to make greater use of locally available fish as part of a nutritious diet.



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"From research to reality: Nourishing lives and building zero-hunger communities."



SDGs Report 2025 : Supplementary Report