SDG Accord Reporting 2021 CASE STUDY

IPB University
Bogor Indonesia

Integration of SDGs in

☐ Institutional governance/strategic level
☒ SDGs in research
☐ SDGs in campus operations
☐ SDGs in curriculum development
☐ SDGs in student engagement activities
☐ SDGs into community activities ☐
SDGs at a whole-institution level

Focus on

☒ Goal 1 - No poverty
☒ Goal 2 - Zero hunger
☐ Goal 3 - Good health and wellbeing
☐ Goal 4 - Quality education
☐ Goal 5 - Gender equality
☐ Goal 6 - Clean water and sanitation
☐ Goal 7 - Affordable and clean energy
☐ Goal 8 - Decent work and economic growth
☐ Goal 9 - Industry, innovation and infrastructure
☐ Goal 10 - Reduced inequalities
☐ Goal 11 - Sustainable cities and communities
☐ Goal 12 - Responsible consumption and production
☐ Goal 13 - Climate action
☐ Goal 14 - Life below water
☐ Goal 15 - Life on land
☐ Goal 16 - Peace, justice and strong institutions
☐ Goal 17 - Partnerships for the goals

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Theme: Development of Paddy IPB 3S Seed for Indonesia's Sovereignty

Increasing agricultural productivity is necessary to reduce Hunger and poverty. Starting from 2015, IPB has produced a high yield variety using less fertilizer and water than conventional irrigated rice. Dr. Hajrial Aswidinnoor, a lecturer at IPB University who is a seed breeder, presented his achievement in developing a New Type of Rice (PDB), called IPB 3S. IPB 3S seeds have been cultivated in more than 700 hectares of field rice in Karawang as a dissemination center which has also involved hundreds of farmers. Just in one year, the IPB 3S rice seed has initiated an industry collaboration development between the IPB-AGH Seed Center and the Industry (PT Botani Seed Indonesia) for expanding the number of seeds' variety. Through this collaboration, IPB has increased rice productivity through IPB 3S Paddy. It leads to SDGs 2 achievement and increased farmer's income (SDG 1).

Until now, the total seed production is 1415.30 tons planted in 47 thousand hectares. An estimated 2.08 ton/ha GKG productivity increase; it has increased production of 98,127.46 tons of GKG. The total output of the IPB 3S variety is 330,236.7 tons of GKG (Rp. 1.82 trillion). The cooperation for developing the IPB 3S paddy variety industry is carried out jointly betweeen IPB Seed Center & PT Botani Seed Indonesia. To this date, both keeps introducing IPB 3S variety to widen its application.

IPB's 3S variety innovation has received much appreciation from various parties. One of them is the president of the Republic of Indonesia, Joko Widodo. "I got much information that one hectare planted with the IPB-3S variety, which produces 12 tons of rice. This was an excellent result, and I will follow up later with IPB so that it can be developed with even greater numbers," said Jokowi.

BENEFITS

Paddy varieties IPB 3S are new type of irrigated lowland rice varieties with sturdy architecture and dense panicles, so as to increase the productivity of paddy fields, especially in areas that are suitable. Paddy IPB 3S is a group of Cere rice, growth duration ± 112 days, the number of grains per panicle 218-223 grains with the yield average of 7 tonnes / ha and yield potential could reach 11.2 tonnes / ha. Increasing the paddy productivity in Indonesia is essential to boosting food production and rural incomes. Thus, it will lead us to reduce hunger and poverty.

BARRIERS

The demand for IPB 3S Paddy seeds is increasing every year. One of the obstacles to the development of the IPB 3S variety is the limited number of seeds available.

IPB has not produced seeds of IPB 3S varieties on a large scale. To overcome this problem, IPB collaborates with local seed breeders in various regions to produce IPB 3S seeds so that the demand for seeds in farming can be fulfilled.

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	**Description:** First harvest of IPB 3S Paddy in Demonstration Plot by IPB in Banjar Municipality **Source:** IPB University' documents (https://lppm.ipb.ac.id/panen-perdana-demplotpadi-ipb-3s-oleh-lppm-ipb-di-kota-banjar/)
	**Description:** IPB 3S products in a packaged form that are sold online at the IPB Store, with detailed seed characteristics as follows: 1. Origin of crosses: IPB-6-D-10S-1-1-1 / Fatmawati; 2. Group: Cere; 3. Plant age: + - 112 days; 4. Plant height: + - 118 cm; 5. Productive tillers: 7-11 stems; 6. Plant form: Upright; 7. Compensation: Hold; 8. Loss: Moderate; 9. Grain colour: Yellow straw; 10. Average yield: 7.04 ton ha of GKG 11. Potential yield: 11.23 tonnes ha of GKG; 12. Weights 1000 grains: + - 28.2 grams; 13. Rice texture: fluffier, and 14. Amylose levels: + - 21.6% **Source:** https://www.ipbstore.com/benih-padivarietas-ipb-3s-label-ungu-10kg

CONCLUSIONS

Innovation in rice variety is a strategy to get a breakthrough in a productivity surge and loss minimization through the development of New Type Rice. Such an innovation is required for other food commodities to enhance food security and eliminate poverty of farmers.