12 RESPONSIBLE CONSUMPTION AND PRODUCTION

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6514 Campus Population

9 Number of Documents Publications

UM Surabaya is committed to advancing SDG 12 by fostering sustainable consumption practices and promoting efficient use of natural resources across the university. The institution implements environmentally responsible policies that reduce waste, minimize pollution, and encourage the campus community to adopt eco-friendly habits. Through education, research, and partnerships, UM Surabaya strives to build a culture of sustainability that supports responsible production and contributes to long-term environmental well-being.

Surabaya UM Community Service Students Turn Waste into Environmentally Friendly Liquid Fertilizer

Utilization of household waste is encouraged to reduce waste. Starting from re-processing the creation of useful and economical goods until they are fit for sale. University of Muhammadiyah (UM) Surabaya Real Work Lecture (KKN) students process waste into basic materials for environmentally friendly fertilizers through combustion engines. The incendiary engine which is made takes two months to work on and has been tested in Bulak Banteng District, Surabaya.

Dikki Yostiano Ferhansyah, a KKN member in Bulak District, explained that the reason for this device, which is called a low-emission waste burner, is due to the large amount of household waste that continues to accumulate. Moreover, people prefer to burn in the open which causes disturbances around the environment rather than burying garbage.

“In the Bulak Banteng Urban Village, there is still a lot of rubbish lying around. This is our reference for making appropriate technological innovations," he said at the KKN innovation exhibition, Tuesday (30/8/22).

Dikki explained how the tool works quite easily, household waste such as paper and dry leaves are put in the drum first to be burned. The smoke generated from burning waste will be sucked up by the blower fan inside the machine. Then the smoke will rise and be sprayed using a sprayer. At this stage the smoke will become liquid dew, this liquid will become fertilizer.

"Fertilizer is good to use if the color of the liquid is yellow or black, but the process takes longer," said Dikky again.

The tool, which was made by 19 inter-faculty Community Service Students, spent around IDR 1 million, with a capacity of 25 milliliters of liquid fertilizer and 20 kg of waste. While the components used in making this tool are drums, sprayers, hoses, blowers and water pumps.

Dikki added that although using all types of waste, each type of waste has a different duration. Like the use of dry garbage about 2 hours. Meanwhile, plastic waste and bottles take about 1 day longer to turn into liquid smoke.

"The advantage of this tool is that it is environmentally friendly, when compared to fertilizers from manufacturers that damage the soil. Another advantage is that the ashes from the waste can be reprocessed into paving," he said.

Responsible Consumption and Production

Meanwhile, the low-emission waste incinerator is one of the 45 Innovation Products for Serving Villages with Innovation through KKN UM Surabaya. UM Surabaya Chancellor Sukadiono stated that the innovative products exhibited by Um Surabaya students would be assisted in obtaining Intellectual Property Rights (IPR).

Link : Surabaya UM Community Service Students Turn Waste into Environmentally Friendly Liquid Fertilizer | Muhammadiyah University of Surabaya

UMSurabaya Students Make Household Waste Processing Drums into Fertilizer

Students of the University of Muhammadiyah or UMSurabaya who are undergoing a real work lecture or KKN process waste into basic materials Eco-friendly fertilizer through the combustion engine. One of the KKN participants UMSurabaya Dikki Yoestiono said the household waste incinerator was worked on by his team for two months and had been tested in Bulak Banteng District, Surabaya. "The background of making this low-emission waste incinerator is the background of the large amount of household waste that continues to accumulate. Not a few burn it in the open so that it disturbs the surrounding environment," said Dikki, Tuesday (30/8).

The team, which totaled 19 students, found garbage scattered in the Bulak Banteng area. This triggered the creation of such appropriate technological innovations. The way the tool works is quite simple. Household waste such as paper and dry leaves are put in a drum first to be burned. The smoke produced from burning garbage will be sucked by the blower fan in the engine.

"Next, the smoke will rise and be spread using a sprayer. At this stage, the smoke will become dew liquid, then become fertilizer," he said. Fertilizer is good to use if the color of the liquid is yellow or black, but it requires a long enough process.

The waste incinerator spent Rp 1 million to make it with a capacity of 25 milliliters of liquid fertilizer and 20 kilograms of waste. The components used are drums, sprayers, hoses, blowers, and water pumps.

Dikki added that although it uses types of waste, each type has a different duration. He gave an example such as the use of dry waste takes two hours, while plastic waste and bottles take longer, namely one day until it becomes liquid smoke. "The advantage of this tool is that it is environmentally friendly, while fertilizer from the manufacturer damages the soil," explained Dikki.

Link: UMSurabaya Students Make Household Waste Processing Drums into Fertilizer- Article 2 - East Java JPNN.com



