

Salak Farmers Utilize Bioethanol Installation Equipment

Monday, 05 September 2011 WIB, By: Marwati


Salak (snake fruit) farmers no longer have to throw away salak's meat waste. Thanks to the support of UGM KKN PPM students, in addition to compost production, salak waste can also be developed into bioethanol. The plans are that not just the waste of the fruit that can be processed into bioethanol, but also its stems and seeds.

"The average of salak waste not worth selling is as much as 5 percent. It's such a pity if the salak meat is not utilized. The plan are that in the future we will also use the stems and seeds to be processed into bioethanol," said Field Supervisor of KKN PPM, Prof. Dr. Karna Wijaya, M. Eng., when supervising the setting up of bioethanol installation equipment for home industry and training of bioethanol making from salak waste in Kelor sub-village, Bangunkerto, Turi, Sleman regency, on Sunday (21/8).

The lecturer of Department of Chemistry, Faculty of Mathematic and Natural Sciences mentions the destilator equipment is made by UGM Center for Energy Studies. The 1.5 million rupiah equipment was handed over to salak farmer groups to be utilized sustainably. "We want to build independent village in terms of energy, at least 60 percent of energy needs can be self-produced here," he said.

According to Wijaya, the tool has a capacity of 25 liters of bioethanol, consisting of two distillatory tubes. Previously, salak waste is fermented in advance for one week by adding yeast and urea. The fermentation liquid is then heated to a temperature of 70 degrees in the distillation tube.

One of the students, Muhammad Shidiq, said the use of salak waste to be processed into alternative fuels through the installation of bioethanol installation tool is the theme of the KKN PPM program being implemented in the District of Turi, Sleman. Assisted by 30 students of, socialization and training for salak farmers were held routinely. "We've held the training four times," he said.



Usually, the salak waste is thrown away at the yard, being left to rot and then used as compost. Now, the students direct the farmers to use it into bioethanol. The method is actually very easy. The salak fruit is peeled and grated until smooth. Afterwards, it is put in a bucket or a drum to be mixed with yeast and urea to accelerate fermentation. It takes 3-4 days for the fermentation. Then, the fermented liquid is filtered and put into a distillatory tube.

Head of Kelor Sub-village, Darmojo (47), welcomed the program conducted by the students that introduced the salak waste processing program. He expects the program to be immediately applied by his people who are mostly work as salak farmers. "The bioethanol is not only a substitute for kerosene, but it can also improve their economic prosperity," he said.

Darmojo said in Kelor sub-village the harvest result of salak reached 8-9 tons. Of this amount, about 5 percent of the crop is not worth selling. "Usually, every one thousand square meters of salak garden comprises approximately 300-clump. Each clump produces 2-3 kilos of salak's harvest," he explained.

Related News

- [UGM Students Develop Bio-ethanol Stove from "Salak Pondoh" Waste](#)
- [Kintamani Residents Appreciates UGM Early Warning Systems](#)
- [UGM Center Develops Energy Efficient Product Innovation](#)
- [UGM Students Utilize Fruit Waste into "Bioethanic"](#)
- [UGM Students Utilize Solar Energy for Aquaculture](#)