

Animal Science Faculty Develops Environmentally Friendly Farming

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Methane is one of the causes of global warming. Animal farming sector is stated as one of the producer of high methane, especially from ruminants. Meanwhile, methane which is too high also affects cattle productivity, hence economic losses.

Poor farming management also exacerbates the condition. Almost 90% of farming is run traditionally that is not aware of global warming or methane issue. Lack of knowledge and technology makes farming not run in environmentally friendly manner. Based on this condition, Nutrition Biochemical Lab of Faculty of Animal Science UGM has empowered the farmers related to mitigation and efficient technology transfer.

Prof. Dr. Ir. Lies Mira Yusiaiti, S.U. IPU, programme coordinator, said simple technology can be done by farmers to reduce the methane gas production in ruminants. "This can be done by manipulation and improvement of feed to be given to the cattle," she said.

In an empowerment programme funded by Research, Technology, and Higher Education Ministry, Lies and team have developed an efficient technology that is easy to be adopted by the farmers.



“We introduce the Natural Methane Reducing technology from leaves that contain tannin. Tannin is an active substance in plants that can inhibit methane production in ruminants. The plants are teak (*Tectona grandis*), calliandra (*Calliandra calothyrsus*), and mahogany (*Swietenia mahagoni*). These are processed for easy use,” said the Head of the Lab.

Lies described the NMR technology has been adopted by Gama Ngudi Lestari group in Banyusoco village in Gunung Kidul regency. The group is taught how to run the technology from potential plants and how to use it for cattle. A grinder machine is also distributed to the group to enable the NMR product making.

The technology has also been adopted by Sedyo Rukun group in peri-urban Bercak village in Sleman regency. “The problem of peri-urban area is land availability for green feed which makes the feed has low quality,” she said.

The group is also taught on making fermented completed feed from straws. The fermentation will allow the farmers to provide good quality feed with suitable nutrients for cattle as well as reducing methane gas.

Narto, chairman of Sedyo Rukun group, explained the training for fermented completed feed and NMR technology could help the farmers in providing good feed for the cattle. “Particularly in the dry season which is difficult to get materials for feed,” he said.

Prof. Dr. Ir. Zaenal Bachruddin, M.Sc. IPU., one of programme members, said that good feed management can be the key to the success of animal farming. The indicator, according to Zaenal, is visible in the increased productivity of cattle or pollution level.

“The presence of transfer of technology is expected to contribute to educating the farmers in environmentally friendly farming,” he said.

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