

Green Algae Potential to Treat Mastitis in Cow

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Milk production in Indonesia can only meet 30% of the domestic need while the 60 percent is still imported. One of the reasons is the frequent case of mastitis in Indonesia. Mastitis has caused great losses to farmers because of the damaged milk production due to the infection by pathogenic microbes. Mastitis treatment still uses conventional antibiotics but continuous use will increase the residual antibiotics in the milk and potential for increased bacterial resistance to the antibiotics.

Three UGM students in Veterinary Medicine, Marista Kurniati, Dion Adiriesta Dewanda, and Yusuf Farid Achmad have made use of green algae (*Ulva fasciata*) as natural medicine for mastitis.

Under the supervision of lecturer and Dean of the Faculty, Prof. Dr. drh. Siti Isrina Oktavia Salasia, and with the funding from the Higher Learning Directorate General, they made use of the Indonesia's marine abundance to treat mastitis, particularly that is caused by Methicillin Resistant *Staphylococcus aureus* (MRSA) in cattle.

According to Marista Kurniati, green algae is abundant across Indonesia, particularly in Gunungkidul coastlines, but not yet utilised optimally by society. The plant produces metabolite that is antibacterial, anti-inflammatory, anti-proliferative, anti-viral, and antioxidant. "The bioactive compound of *Ulva fasciata* have the potential as natural medicine for various infections," she said on

Friday (13/7) at Faculty of, Veterinary Medicine UGM.

They first extracted the green algae, then in vitro testing with diffusion method to know the bacterial blockage zone and determine the effective concentrate of the extract that can inhibit or kill the bacteria

Later they tested on the rat that is infected with Methicillin Resistant Staphylococcus aureus (MRSA) bacteria by dipping and per oral. "The test is done for 14 days and produces positive results," she said.

Marista hoped the potential of green algae as natural medicine for mastitis can reduce the use of antibiotics and be developed for cattle.

"We hope this can be used directly for goats that have mastitis," she said.

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