



Many farmers do not cover liquid and solid manure, hence losing nutrients. PHOTO/ PROMISE TWINAMUKYE

Poor handling of manure poses environmental, health risks

BY PROMISE TWINAMUKYE

Despite the continuous efforts to encourage farmers to increase crop production and productivity, less or no efforts have been put on sustainable livestock manure use, which calls for reinvention of simple ways to boost the agricultural sector.

This is due to inadequate manure management skills that leads to nutrient loss, reducing quantity and quality of the organic fertiliser applied.

Experts say without correct management, manure can lead to several negative environmental and health (in animals, humans and ecosystem) risks.

Livestock manure is a critical asset that can help overcome yield limitation because it improves soil health, provides nutrients to plants and improves crop yields, thereby contributing to food security and nutrition. It can also be used to generate clean energy (i.e. biogas) for lighting and cooking.

STATISTICS

According to the 2021 pig population, the excreted Nitrogen in manure is potentially an equivalent of 3 million 50 kg bags Urea fertilizer. Statistics also show that 45 percent of farmers own 1-4 pigs, 35 percent own 5-10 pigs, 15 percent (11-20) while 5 percent own 21-65 pigs but high use and demand for manure in areas where crop enterprise is important. Mpigi, Buikwe and Mukono contribute 5 percent of the pig population.

But scientists say the management of manure is sub optimal in a way that they do not cover manure, leading to its exposure to sunlight and rain thereby losing the nutrients and that also cause air and water pollution.

Dr Ibrahim Wanyama, a scientist with International Livestock Research Institute (ILRI) says a lot of manure is generated but there is lack of information on how it's managed and handled.

"If you do not handle manure well; if you do not store the manure well, you lose most of the nutrients, especially nitrogen. If you expose it rain water, it dissolves those nutrients and they are lost. Also if you expose it to sunlight you lose almost 50 percent of the nitrogen," he warns.

"We want to devise simple ways which can be adopted by the farmers - simple methods which can retain these nutrients but at the same time reduce on the pathogen lots in the manure."

Dr Wanyama adds that farmers are not aware of the health implications of poor handling of manure.

"For you to be safe, you need to take all the safety precautions. You need to put on gloves and masks but most of them (farmers) just put on gloves and gumboots and leave out the other safety gear," he says.

He was speaking during the unveiling of a research by agricultural promoters, Regenerate Africa and ILRI with partners Makerere University, Vétérinaires Sans Frontières Germany, Food and Agriculture Organization, and Swiss Federal Excellence Centre for Agricultural Research in Kampala recently.

The study were implemented under the project, 'Circularity of Nutrients in Agroecosystems and Co-benefits for Animal and Human health,' financed by Solution-oriented Research for Development (SOR4D) programme, a joint funding instrument between the Swiss Agency for Development and Cooperation (SDC) and the Swiss National Science Foundation (SNSF).

The research shows a large percentage of farmers (i.e. 96%) in Mpigi, Buikwe and Mukono districts do not cover liquid and solid manure pits and heap, hence losing nutrients, which calls on extension workers to train them on best practices.

"...we find that most farmers keep manure between one and three months and then they take it to the garden. This practice is good if best practices are considered," says the research.

In Uganda, the project interventions focus on piggery, to generate evidence-based research outputs on climate smart agriculture and safe manure practice.

"We are working to transition from conventional to non-conventional fertilizers. So the composite manure is a big component of sustainable farming practices including regenerative agriculture, agri-ecology. The use and management of manure, once compromised it does not give you the end use," the research reads in part.

According to Dr Angela Nakafeero, the Commissioner, Gender and Women Affairs, Ministry of Gender, Labour and Social Development, the discussion about manure is very important; and that it should be looked at as a resource because so many products can be made out of manure and can be handled as an income generating activity.

She adds: "...so it can help small scale farmers and especially women to earn an extra income. Proper management of manure and utilization is important in terms of improving productivity."

Dr Joshua Zake, Technical and Strategic Advisor at Regenerate Africa indicated that the policy review and gap analysis results reveal that absence of specific policy frameworks and guidelines to advance sustainable livestock manure management.

He says manure management is a cross sectoral issue with policies and laws cutting across - Health; Agriculture; Energy; Gender, Labour and Social Development; Water and Environment sectors.

"Insufficient data on manure quantities and greenhouse gas emissions from manure; and high costs of technologies that support treatment and utilisation of manure, such as biogas systems," says Dr Zake.

He says that some policies are conscious about gender and inclusion (women and youth participation) in general terms, but not very explicit to manure management.