

Namugenyi turns used diapers into fertiliser

According to Ms Victoria Namugenyi, the process involves separating different layers of the diapers. The outer layer is disposed of and the inner layer is kept in a sack to decompose into manure.

BY DAVID SSEKAYINGA

Victoria Braton Namugenyi, a resident of Kalangala Town Council, has discovered an innovative way of turning used baby diapers into fertiliser.

Namugenyi says the waste management challenge she faced from 2021 to 2026 as the deputy LC3 chairperson for Kalangala Town Council inspired her to start this innovation.

"Poor disposal of pampers (diapers) remains a major challenge in our area, with many residents handling waste recklessly. This prompted me to look for solutions," she says.

According to Ms Namugenyi, some people in her area dispose used diapers into pit-latrines, others dump them in garbage collection points and some bury them in the soil, which continues to affect the environment and tarnish the image of the town.

"Diapers are littered all over landing sites. During my visits to the landfill, I could see that diapers are among the waste that doesn't decompose easily no matter how long it takes," she says.

Namugenyi, a mother of triplets, explains that her daily expense on diapers and the large volumes of diaper waste pushed her to search for a solution.

"During a discussion with environmental experts, I learnt that one can make fertiliser from used baby diapers and that's how I started," she says.

How Namugenyi does it

According to Namugenyi, the process involves separating different layers of the diapers. "After a diaper has been used, I separate the outer layer from the inner layer, and keep the inner layer in a sack or a hall to decompose into ma-



Ms Victoria Braton Namugenyi displays her banana plants on which she applied diaper fertilizer she made herself. PHOTO/DAVID SSEKAYINGA

nure," she says.

She adds that after two months, the decomposed material is applied to the garden before and after planting.

Ms Namugenyi says she first tested the decomposed diapers on banana plantation in her backyard, which had previously been used as a dumping site for waste, and observed positive results.

The manure, she says, later revived a banana plantation that had started drying due to poor soil nutrients.

"On the banana plant, I place the manure a few inches from the stem and let the roots absorb the nutrients. The same method can be applied to other crops such as coffee, but for crops like beans and maize, you mix the decomposed inner layer with soil to get better yields," she explains.

For three years, Namugenyi says she has collected and stored used diapers of her three children, accumulating to 28 sacks of the material, which she

AGRICULTURALISTS SAY

"Researchers need to test and establish how much nitrogen, phosphorus, calcium and other nutrients are contained in the pampers humus. They also need to determine which crops it is suitable for and the right quantities needed for better results," Mr Francis Musoke, an agriculturalist at Ssesse Farm Institute, says. He explains that Namugenyi's work still requires scientific testing to determine its safety and effectiveness.

says has significant economic value.

"I now sell a kilogramme of this manure at Shs30,000 and one sack can fetch up to Shs3 million," she says, encouraging women and youth to

adopt similar initiatives as a way of earning income and addressing environmental challenges.

She says the idea of making manure from used baby diapers came after she ran out of space to dispose of the waste.

"The hole I dug to dispose the diapers got full and I had no other place to put them. I later researched online and found out that I could make manure from them by separating the materials that decompose from those that take longer, like the polyethylene covering on the pampers. Since then, I have never stopped doing it, including using the diapers that had already been dumped in the pit," she says. Disposable diapers continue to pose a growing environmental challenge, with an estimated 300,000 diapers dumped in landfills or incinerated every minute globally.

According to Mr Joseph Byaruhanga, the Kalangala District forest officer, the plastic materials

used in disposable diapers make them highly destructive to the environment once poorly disposed of.

"They cause contamination through plastic waste, greenhouse gases, and chemical leakage, contributing heavily to both solid waste and pollution," he says. Mr Byaruhanga, however, explained that innovations aimed at separating and removing plastic components before decomposition could significantly reduce the environmental threat posed by the waste.

"Single-use diapers contain plastic materials — polyethylene and polypropylene — that do not biodegrade, taking an estimated 500 years to decompose. Knowing how to decompose them without the plastic is a good innovation that could reduce the dangers to the environment," he explains.

He warned that in Kalangala, where waste management systems remain limited, poor disposal of diapers could directly affect water sources and the ecosystem of Lake Victoria.

"Used diapers contain super-absorbent gels, plastics and human waste. When sent to landfills, they release liquids containing toxic chemicals and bacteria — that can contaminate groundwater and nearby water streams," he said. Byaruhanga adds that diapers may also contain harmful chemicals used during manufacturing, posing further risks to both humans and the environment.

"Diapers contain toxic chemicals like dioxins, benzene, xylene, and toluene, which are used in manufacturing and can harm ecosystems," he expounds.

What agriculturalists say

Mr Francis Musoke, an agriculturalist at Ssesse Farm Institute, says the process which Namugenyi uses to make the fertilisers mainly produces humus rather than fertiliser. "When a living thing dies and decomposes, it forms humus. Fertiliser is different because it does not decompose to form humus. For diapers, I would say they mainly produce humus in the soil and not fertiliser," he says.

Humus is a dark organic component of soil formed by the decomposition of plant and animal matter. Agriculturalists say it is rich in nutrients, improves soil structure, increases water retention, and provides essential phosphorus and nitrogen for plant health and is very crucial for fertile soil and agriculture.

Mr Musoke adds that humus from decomposed diapers enables soil to retain nutrients for crops, although for a shorter period, compared to conventional fertilisers.

He explains that Namugenyi's work still requires scientific testing to determine its safety and effectiveness.