

# Using cow dung and microorganisms to compost diapers and sanitary wear

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Credit: Emma Bauso from Pexels

Research [published](#) in the *International Journal of Environment and Waste Management* has looked at how used diapers (baby nappies or adult napkins) and sanitary wear might be efficiently composted using cow dung—a readily available by-product of cattle farming the world over.

Namasivayam Vasudevan, Greeshma Odukkathil, and Gomathi Ravi of the Center for Environmental Studies at Anna University in Chennai, Tamilnadu, India, explain how absorbent hygiene products (AHPs) including diapers and sanitary wear are now ubiquitous in the developing and developed world having broadly displaced the washable and reusable alternatives. As such, they represent a growing waste disposal problem.

AHPs are generally not biodegradable unless somehow pre-processed nor easily recyclable, not least because of the waste they carry with them. They generally accumulate on rubbish dumps and in landfill in regions where such waste is not burnt. More than 250 tons of such waste enters the waste stream in Chennai alone each year, the team writes.

The team has looked at [cow dung](#) and effective microbes that might be able to break down used diapers and sanitary pads. They tested the putative composting process over a sixty-day period, recording chemical and [physical changes](#) in pH, moisture content, carbon-to-nitrogen ratio, and nutrient levels.

The team suggests that their results are somewhat promising. The compost derived from AHPs exhibited favorable characteristics, including a neutral pH, optimal [moisture content](#), and suitable nutrient levels. There was, in addition, a significant drop in overall volume and mass, ranging from 70% to 85% during composting.

This latter point suggests that the composted AHPs would if ultimately destined for landfill at least take up less volume in the site if processed in this way first. The [chemical changes](#) induced by composting would not necessarily make them useful as soil conditioner in other similar applications, but at least the processed materials would be somewhat less polluting.

However, with further optimization, it may well be possible to process used AHPs into a usable [compost](#) for an overall more ecologically conscious approach to their disposal.

**More information:** Namasivayam Vasudevan et al, Effectiveness of cow dung and effective microorganisms on composting of napkins and diapers, *International Journal of Environment and Waste Management* (2024). [DOI: 10.1504/IJEW.2024.137953](https://doi.org/10.1504/IJEW.2024.137953)

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