

LIVESTOCK WASTE VALORIZATION SYSTEM

Success Story/2024-9

LIVESTOCK WASTE VALORIZATION SYSTEM (LWVS): A UNIQUE AND ECO-FRIENDLY INITIATIVE TO RECYCLE CATTLE DUNG AND URINE

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PROBLEMS/CONSTRAINTS

Large quantities of cattle dung and urine are often underutilized, posing environmental and waste management challenges. Farmers face difficulties in effectively managing this waste, which, if left untreated, contributes to pollution and health risks. Traditional utilization methods use the decomposed farmyard manure. A substantial amount of the nutrients is leached if this manure is exposed to the rain. However, this waste is a valuable resource that could be converted into bioenergy and organic fertilizers. Additionally, the rising costs of conventional energy sources and chemical fertilizers further burden farmers, especially in rural areas. There is a pressing need for eco-friendly, sustainable systems that can convert livestock waste into useful resources, while also promoting sustainable agriculture practices and improving farm productivity.

INTERVENTIONS

The Livestock Waste Valorization System (LWVS) is an innovative, eco-friendly agri-startup model that transforms cattle dung and urine into valuable resources through biogas and Phosphate Rich Organic Manure (PROM) production, benefiting farmers, stakeholders, etc. and promoting sustainable agriculture. Established at ICAR-Central Coastal Agricultural Research Institute (CCARI), Goa, the unit processes 200 kg of cattle dung daily, generating 7 m³ of biogas and 400 liters of nutrient-rich slurry. This system provides an alternative energy source, reduces dependency on conventional fuels, and produces Phosphate Rich Organic Manure (PROM), a bio-fertilizer ideal for improving soil health. By addressing waste management and promoting eco-friendly farming practices, the LWVS empowers farmers to cut costs. Empowering Agriculture through the Livestock Waste Valorization System (LWVS) improves yields and fosters environmental conservation.

IMPACT

Over 100 SC farmers have already benefited from training at the LWVS unit, turning livestock waste into wealth and contributing to a greener, more productive agricultural ecosystem. The systems are showcased to students, farmers, stakeholders visiting the institute. More than 1000 students, farmers, citizens and stakeholders have been made aware of the biomass recycling and showcasing the facilities developed.



Awareness on the LWVS to the stakeholders, farmers, etc.