

## A LOW COST TECHNOLOGY FOR THE COLLECTION OF VERMIWASH IN HOMESTEADS

Vermiwash is the leachate collected from vermicompost containing earthworms. Vermicompost contains approximately 75 per cent vermicast. Vermiwash is actually a water extract of compost and the washing of earthworms present in the medium.

A simple device for collecting vermiwash which can be fabricated in households has been developed at the College of Agriculture, Vellayani, Trivandrum. A cross section of the device is given in Fig 1. The system consists mainly of a broad based plastic basin having a capacity of 20-25 litres, a plastic perforated waste paper basket, a PVC pipe of approximately 5 cm diameter and 30 cm length and a

hand pump (siphon). A hole is made at the bottom of the waste paper basket so that the PVC pipe exactly fits into the hole and the waste paper basket is placed upside down in the centre of the basin. The PVC pipe is introduced into the centre of the basin through the hole so that one end of it touches the basin. The outside of the perforated basket is covered with a nylon net to prevent the entry of earthworms into the middle of the basin. Small holes are made up to a height of 5 cm at the lower end of the PVC pipe touching the bottom of the basin so that the leachate passing through the perforated basket is collected in the PVC pipe which can be siphoned out using the hand pump.

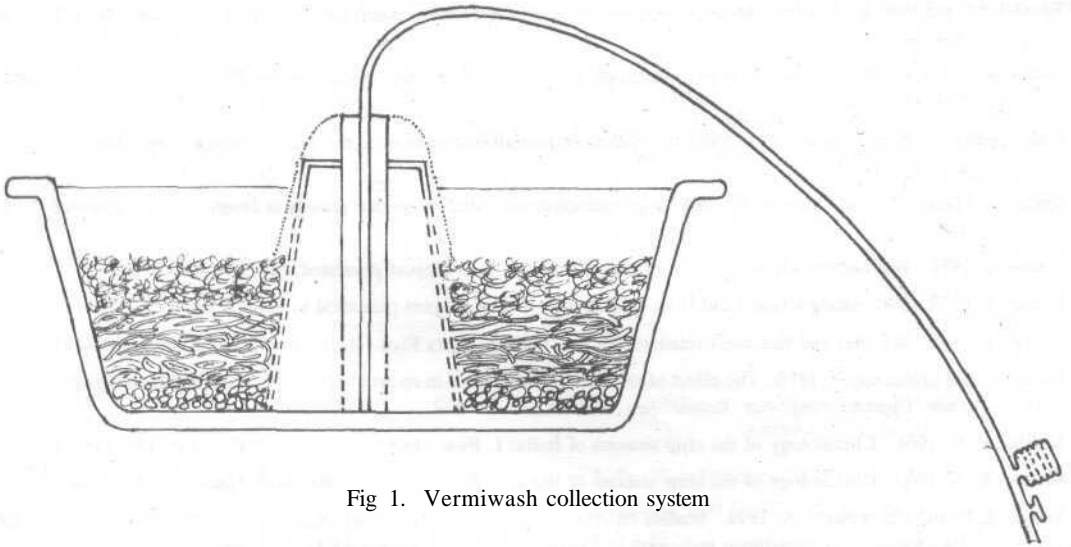


Fig 1. Vermiwash collection system

A layer of small brick pieces or gravel with a layer of coconut fibre of 2-3 cm thickness above it may be placed in the plastic basin outside the waste paper basket. After moistening, 2 kg (approximately 2000 numbers) of earthworms (*Eudrillus eugineae*) are introduced above the fibre. Four kg of kitchen

waste is spread over it initially. By about one week the entire waste will turn to a brownish black compost. Two litres of water is then added to the basin over the compost wetting the entire mass. After 24 four hours, vermiwash which is collected in the PVC pipe can be syphoned out. After removing the entire

vermiwash, another fresh quantity of 2 kg kitchen waste is spread over the compost in the basin and the process repeated. The vermiwash collected is honey brown in colour and odourless with pH 8.5. On an average it contains 200 ppm N, 70 ppm P and 1000 ppm K. Copper, zinc, manganese and iron contents of the vermiwash were estimated to be 0.4, 0.15, 2.25 and 4 ppm respectively. Preliminary analysis of vermiwash for microbial count also

indicated that it contains bacteria, fungi, actinomycetes including nitrogen fixing and phosphorus solubilizing organisms. Most of the nutrients are in plant available form. Vermiwash is also reported to contain a number of enzymes, hormones and vitamins. Preliminary pot culture trials conducted with okra and cowpea as test crops indicated that for each crop the strength of vermiwash to be used as foliar spray requires standardisation.

College of Agriculture  
Vellayani 695 522, Trivandrum, India

**P. Padmaja, K.Ushakumari**  
**P. Prabhakumari**