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UNIVERSITY OF NAIROBI
HOUSING RESEARCH AND DEVELOPMENT UNIT

COMPOSTING TOILETS

Report on a visit to the
Alternative Waste Disposal Project
Dar-es-Salaam

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HOUSING RESEARCH AND DEVELOPMENT UNIT UNIVERSITY OF NAIROBI

COMPOSTING TOILETS

Report of a visit to the

ALTERNATIVE WASTE DISPOSAL PROJECT

of the

Tanzania National Scientific Research Council

Dar-es-Salaam

Date : 4.4.1977

Participants : AWD project - Mr. U. Winblad
Mr. Simbeye
H.R.D.U. - Mr. J. Eygelaar

1. Description of the project

The aim of the project is to test two basic types of compost latrines and two improved type pitlatrines under normal working conditions in Tanzania.

The types being tested are:

- a. Continuous type composting latrine (modified Clivus Multrum)
- b. Double vault latrine
- c. R.O.E.C. latrine (odourless ventilated pitlatrine)
- d. Ventiladed pitlatrine

Types and variants are shown in the attached sketch prepared by Mr. Winblad.

The 15 latrines to be tested have been installed in:

- (i) the Manzese area of Dar-es-Salaam
- (ii) two villages in the coastal region
- (iii) a village in the Morogoro area

All latrines have been built and are in operation.

As this is the first project where the continuous type composting latrine is tested under tropical conditions, a large number (8) of this type has been installed in each of the four locations. H.R.D.U. is particularly interested in the performance of this type and the discussions with Messrs. Winblad and Simbeye concentrated mainly on this type.

2. The continuous type composting latrine (modified Clivus Multrum)a. Variants

The various types installed allow comparison of performance of:

- (i) different slopes of the base slab (18° - 25° - 35°)
- (ii) types with and without internal ventilation ducts
- (iii) "standard" type with large top chamber and comparatively small end chamber, and modified type with smaller top chamber and larger end chamber.
- (iv) "closed" type and type with outlet for excessive water

b. Construction

| | |
|----------------------------|--|
| Base slab | plain (unreinforced) concrete, except for type 14 which has no base plate |
| Walls | concrete block masonry Earlier types built in 4" thick blocks ("commercial" quality). For the later built types good quality blocks 2" thick were specially produced. |
| Baffle wall | concrete block masonry, not supported by lintol (even in the units built in 2" thick blocks) |
| Cover slabs | In earlier types : 20 mm plywood painted to all faces. To later types 18 mm thick ferrocement (three layers chicken wire, 1:2 cement-sand mix, water-cement ratio 0.4). |
| Internal ventilation ducts | split bamboo, diam. app. 100 mm. |
| Ventilation pipe | formed out of sheet iron, painted, with ditto cowl and nylon mosquito wiring to top. |