
VITA TECHNICAL BULLETIN

COMPOSTING PRIVY

by Harlan H.D. ATTFIELD

Illustrated by Marine F. Maspero

The composting privy described here consists of a covered pit and a shelter. When the pit is full, the shelter is taken down, the pit covered, and a new pit prepared. The first pit, after an interval of at least six months, yields compost that can be used to fertilize fields.

This Bulletin gives guidelines for digging the pit, preparing the floor, building the shelter, adding other composting materials, and moving locations when the pit is full. Although prepared for use in Bangladesh, this privy could be constructed anywhere in the world. It is low in cost, easy to build, and requires no special materials. It can be designed to meet a number of cultural requirements.

Harlan H. D. Attfield, the author, has been associated with VITA as

an expert Volunteer for many years and is the author of a number of books and articles, including Raising Rabbits, which is published by VITA.

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COMPOSTING PRIVY

The material, as shown here, has been adapted from a booklet prepared by Harlan H. D. Attfield as part of an innovative and meaningful approach to community development underway in Bangladesh.

The Sylhet Package Program, as this effort is called, is funded by International Voluntary Services, Inc. (IVS), a US-based, private development organization, in cooperation with three local agencies--the Rural Development Training Institute, the Bangladesh Rural Advancement Committee, and the Government's Integrated Rural Development Program.

In summary, the "Package" project involves extension work to promote production of vegetables, high-yielding rice, fish, and ducks;

health and family planning; functional education; and cooperative development.

The composting privy is recommended when compost is needed for gardening. When built correctly, it should help deter spread of disease germs through the nearby water system and it should not attract flies or provide a breeding area for flies.

The plans here call for a dirt floor, but if funds are available, it is recommended that a cement floor be used. This will offer the most complete protection against hookworm and other diseases.

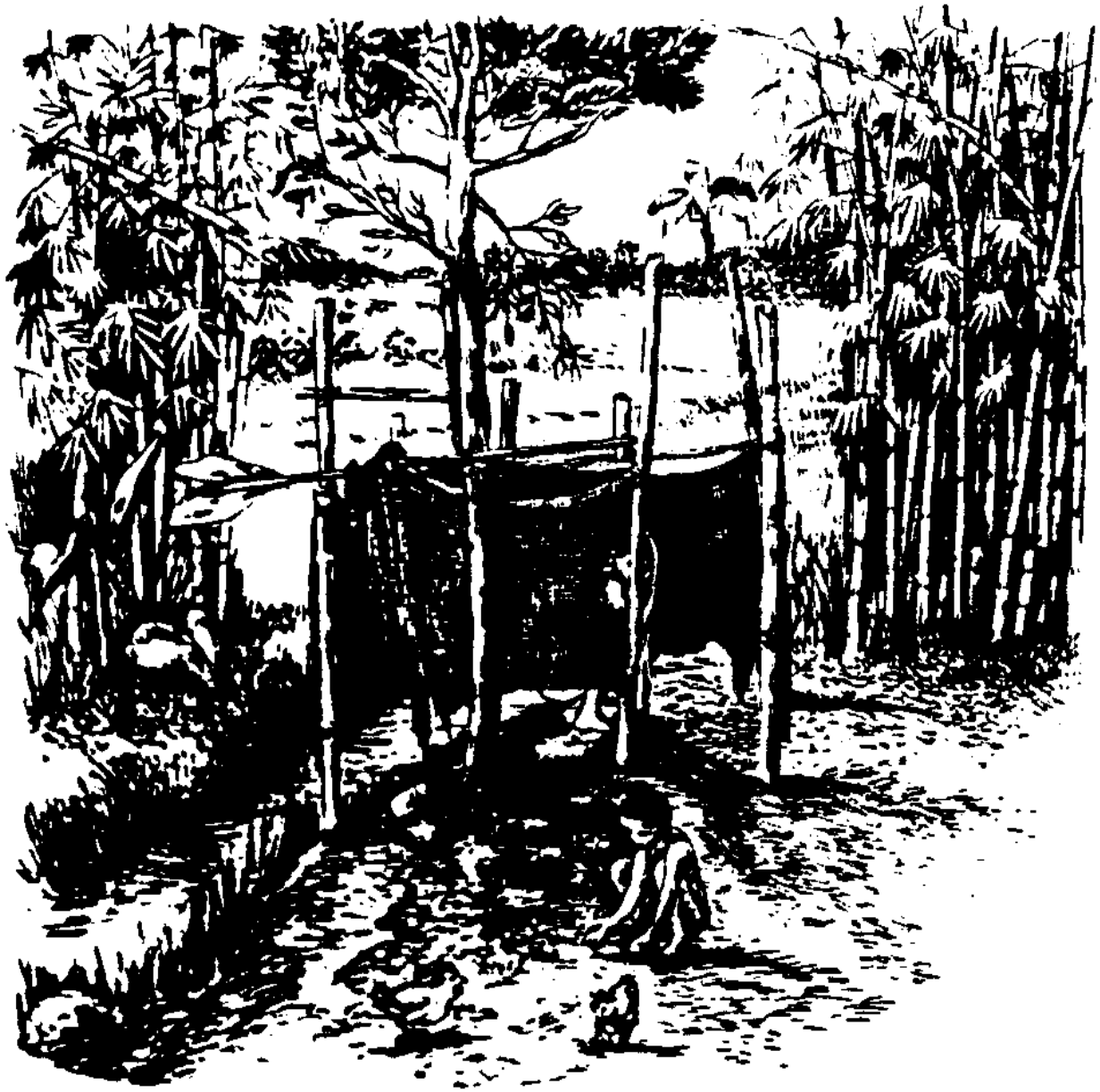
The composting privy can be built with one pit for a family or with two or more pits for a school, camp, or other concern having a need for more than one pit.

All that is needed to build a composting privy is: bamboo poles; a woven mat or gunny sacks; a piece of plastic; leaves, paper, or straw; a small piece of wood; and long grass or corrugated iron sheets.

**This open latrine
is a killer.**

<FIGURE 1>

54p02a.gif (600x600)



Every year thousands of children and adults die

from cholera, fever, and dysentery germs that live in open latrines.

<FIGURE 2>

54p02b.gif (600x600)

These diseases are carried into our homes

**by flies, rainwater,
and animals.**

<FIGURE 3>

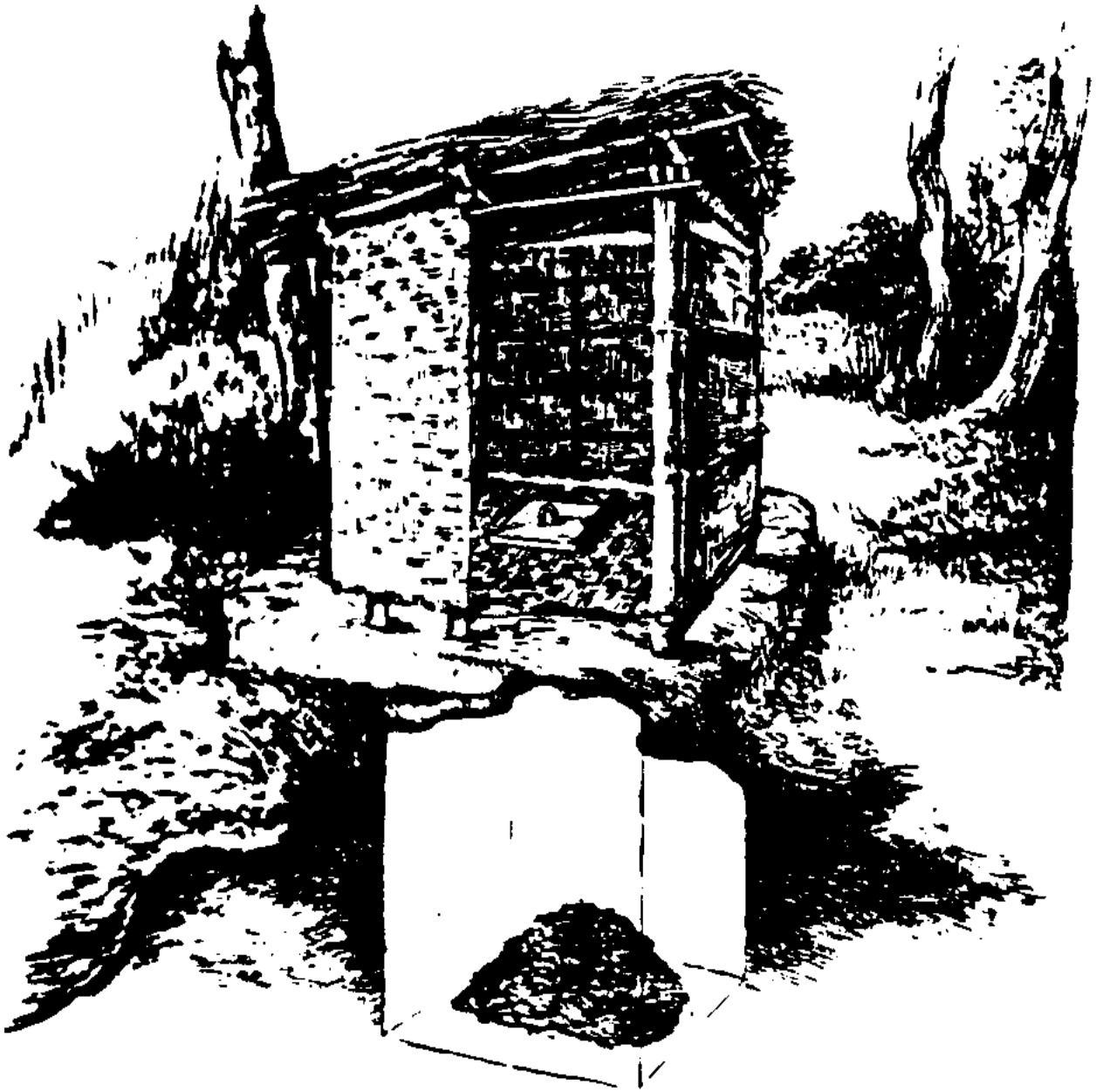
54p03a.gif (600x600)

This is a composting privy. The covered pit

**stops flies, rainwater,
and animals from carrying
disease germs into
our homes.**

<FIGURE 4>

54p03b.gif (600x600)

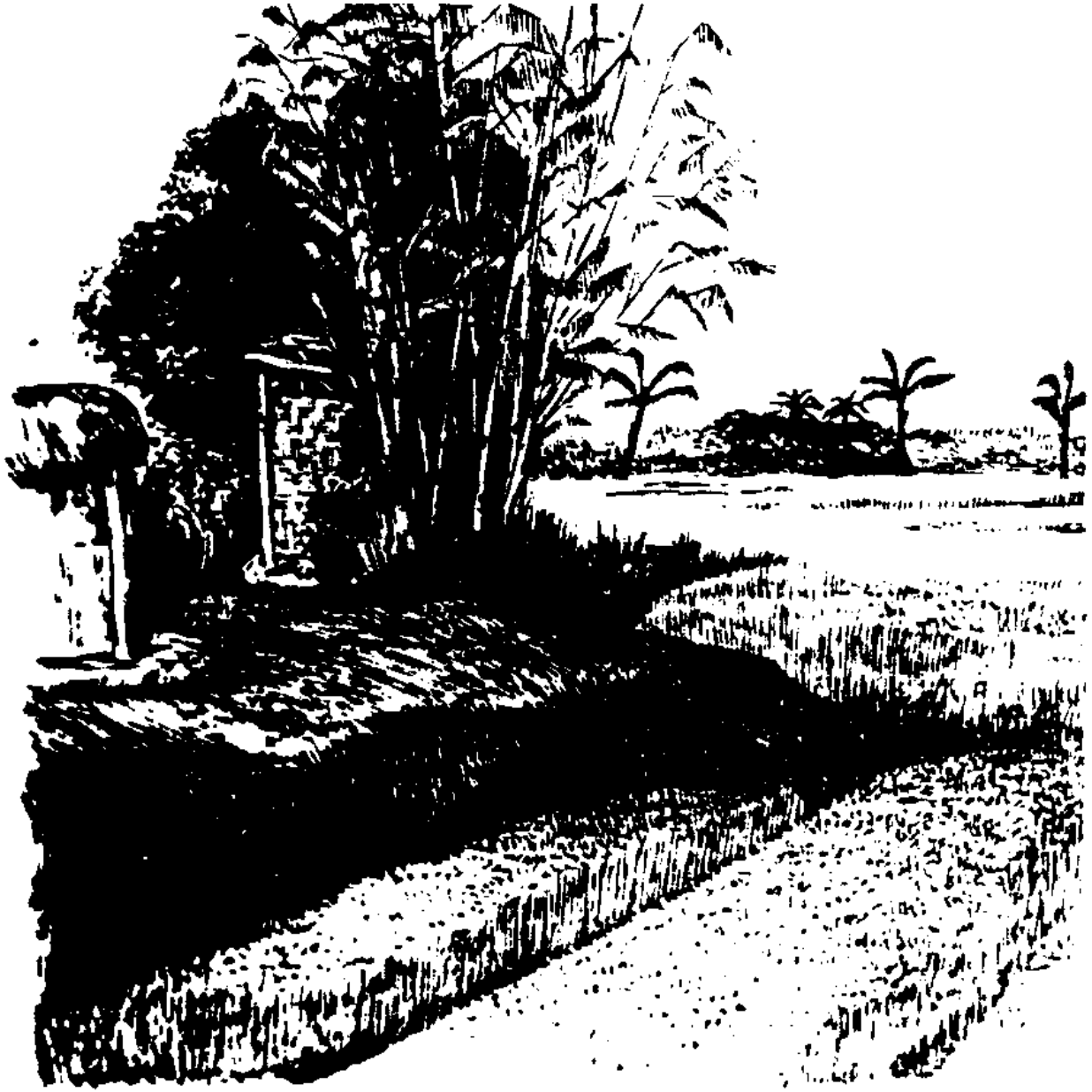


The compost privy can be used if our home is on

high land, where the pit will not fill with water.

<FIGURE 5>

54p04a.gif (600x600)



We would all have better health if

everyone in our village built a compost privy.

Why not build one today!

<FIGURE 6>

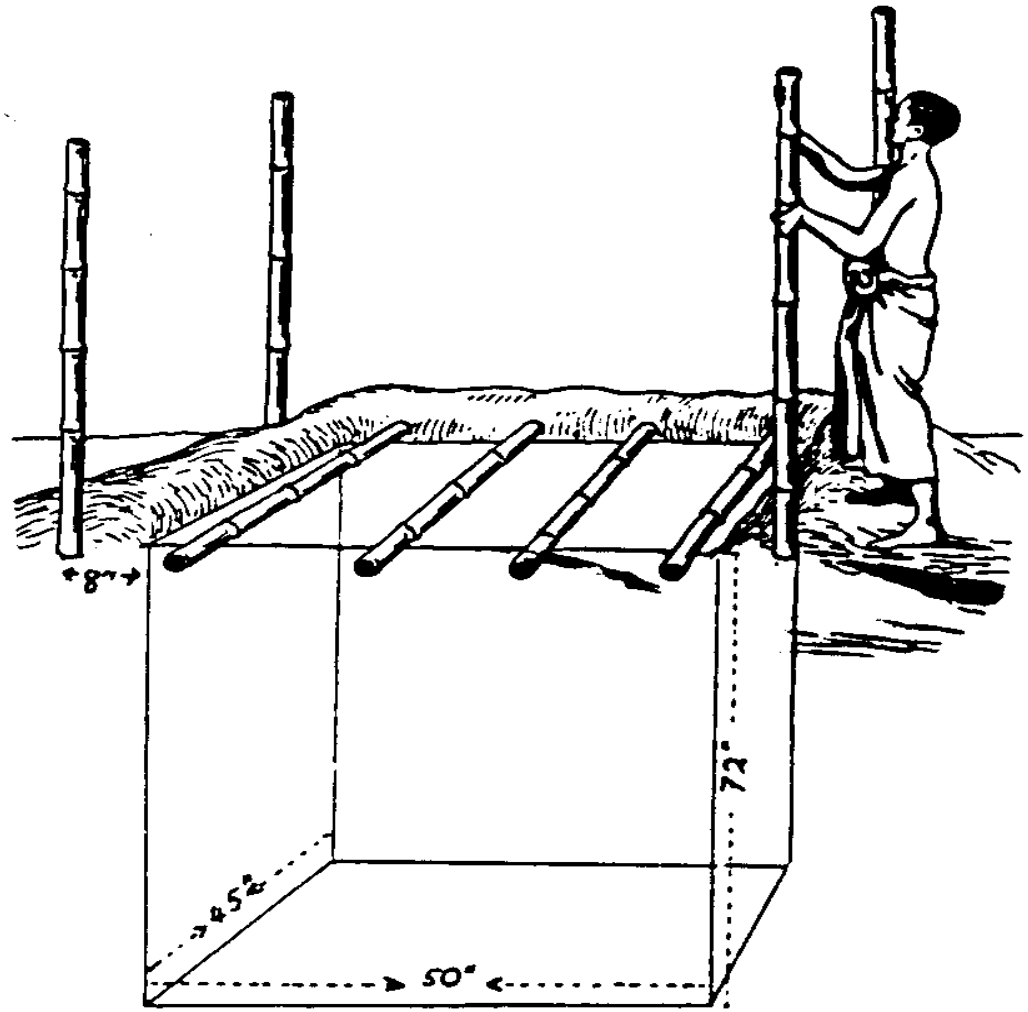
54p04b.gif (600x600)

The following instructions are designed for a pit for use by six to eight people, for a period of ten to twelve months.

Dig a pit 45" wide, 50" long, and 72" deep. Place four round bamboo poles, at least 70" long, over the pit as shown. Place a bamboo pole into the ground at least 8" away from each corner of the pit. These will be the supports for the walls and the roof.

<FIGURE 7>

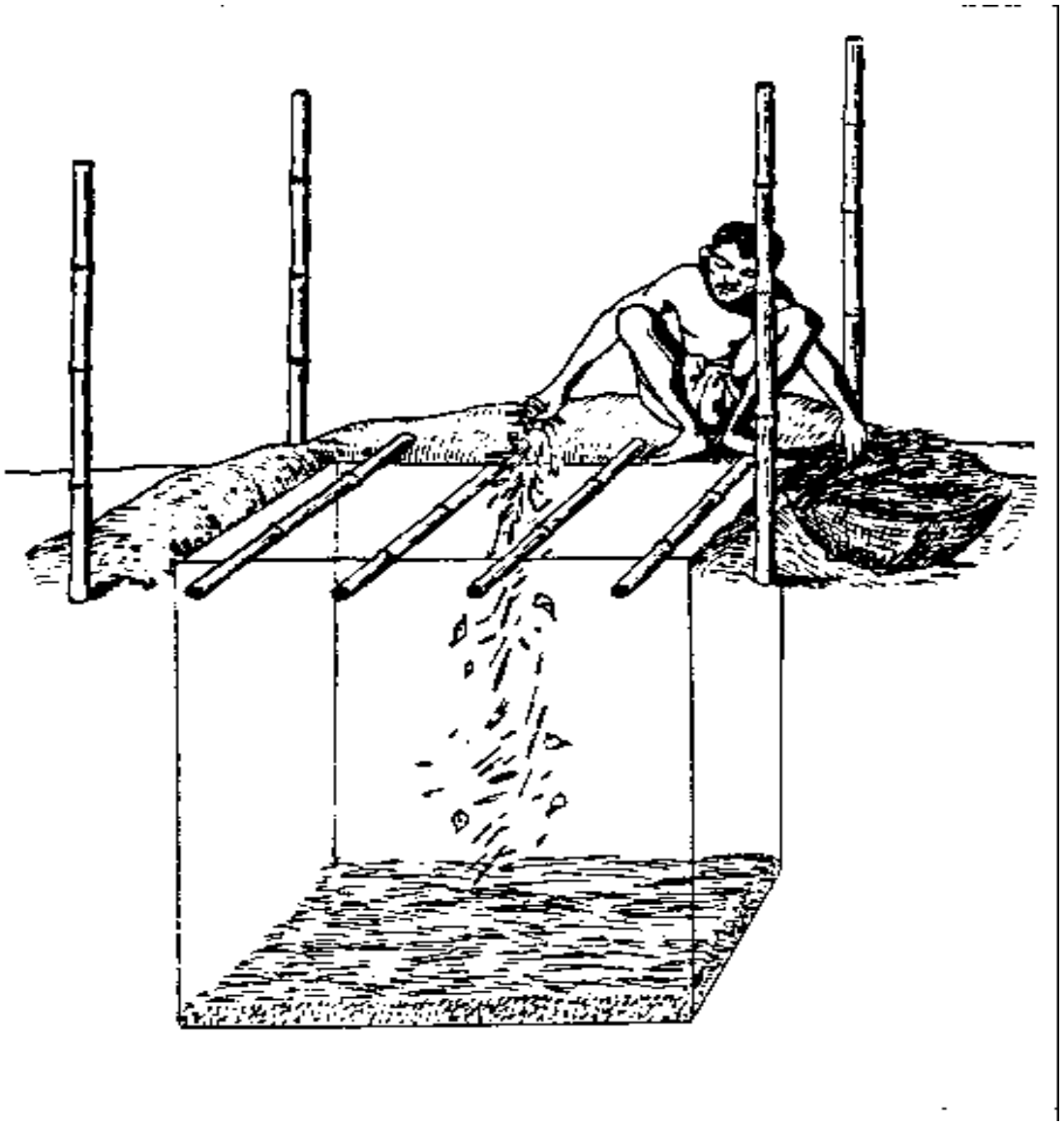
54p05a.gif (486x486)



Line the bottom of the pit with 18" of grass cuttings, fine leaves, paper, or straw.

<FIGURE 8>

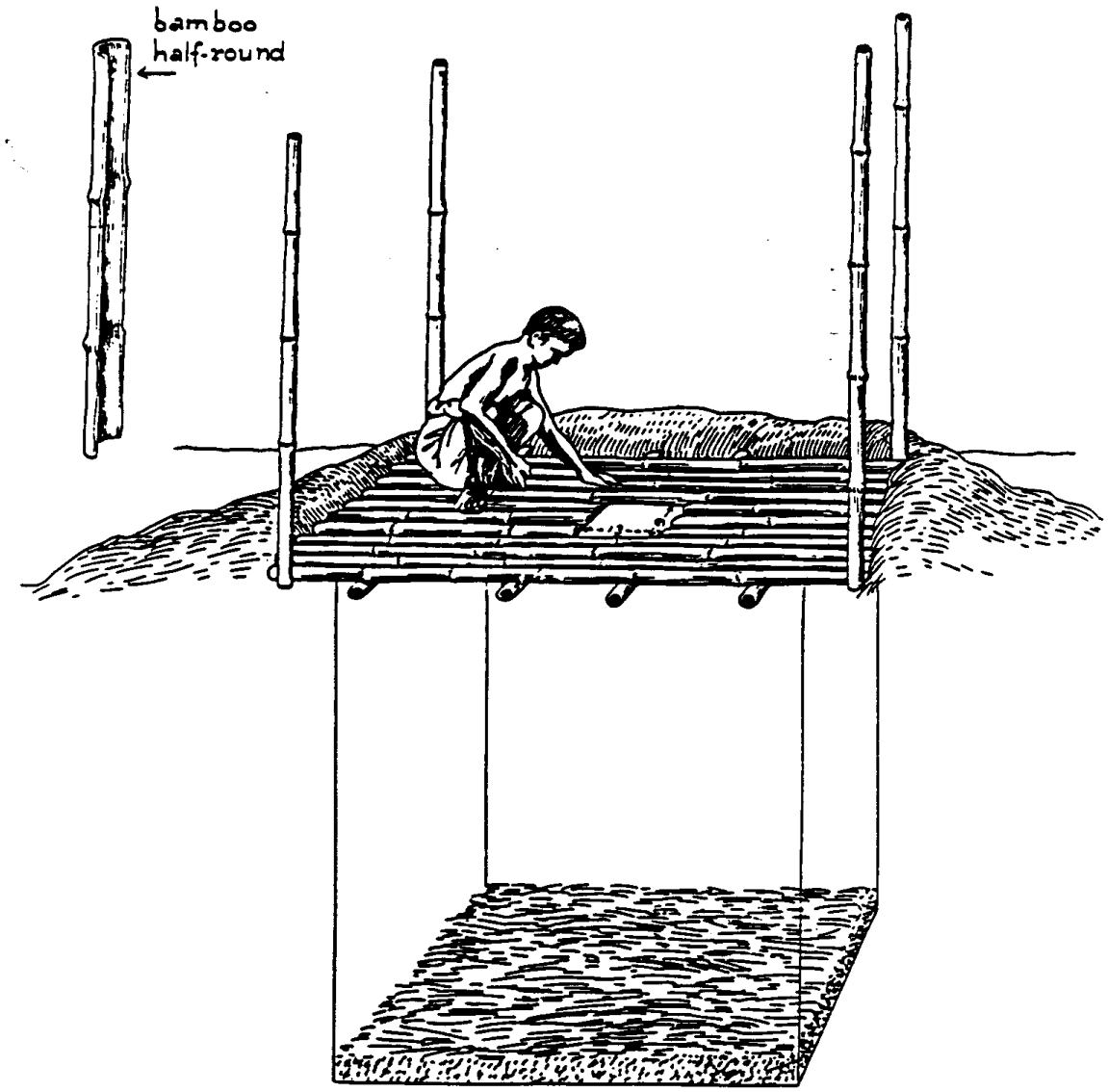
54p05b.gif (540x540)



Cover the floor poles with half-rounds of bamboo, leaving a hole approximately 6" X 13", in the middle of the floor.

<FIGURE 9>

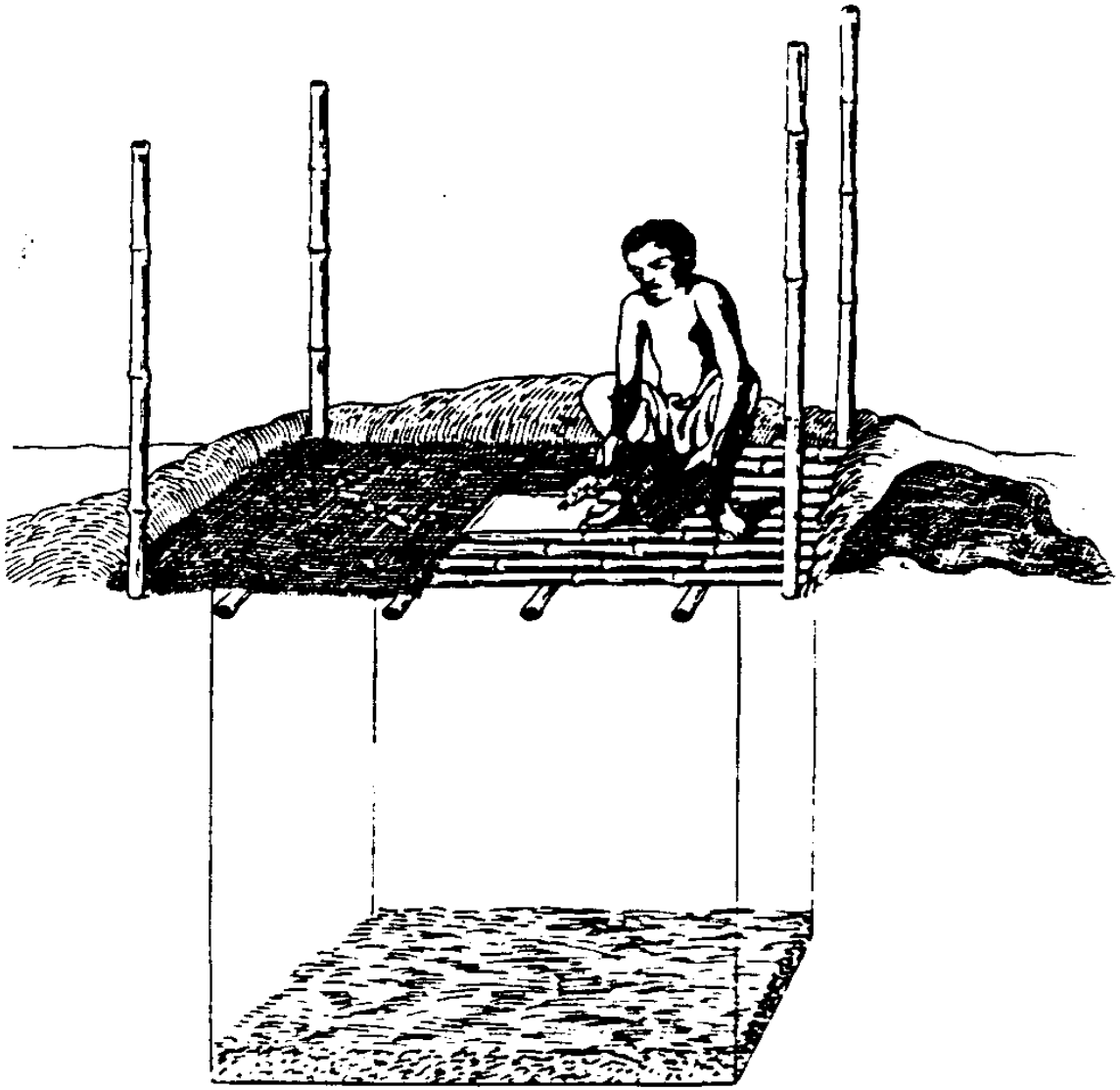
54p06.gif (540x540)



Leaving the floor hole uncovered, place old woven mats or gunny sacks over the half-rounds of bamboo.

<FIGURE 10>

54p07a.gif (540x540)

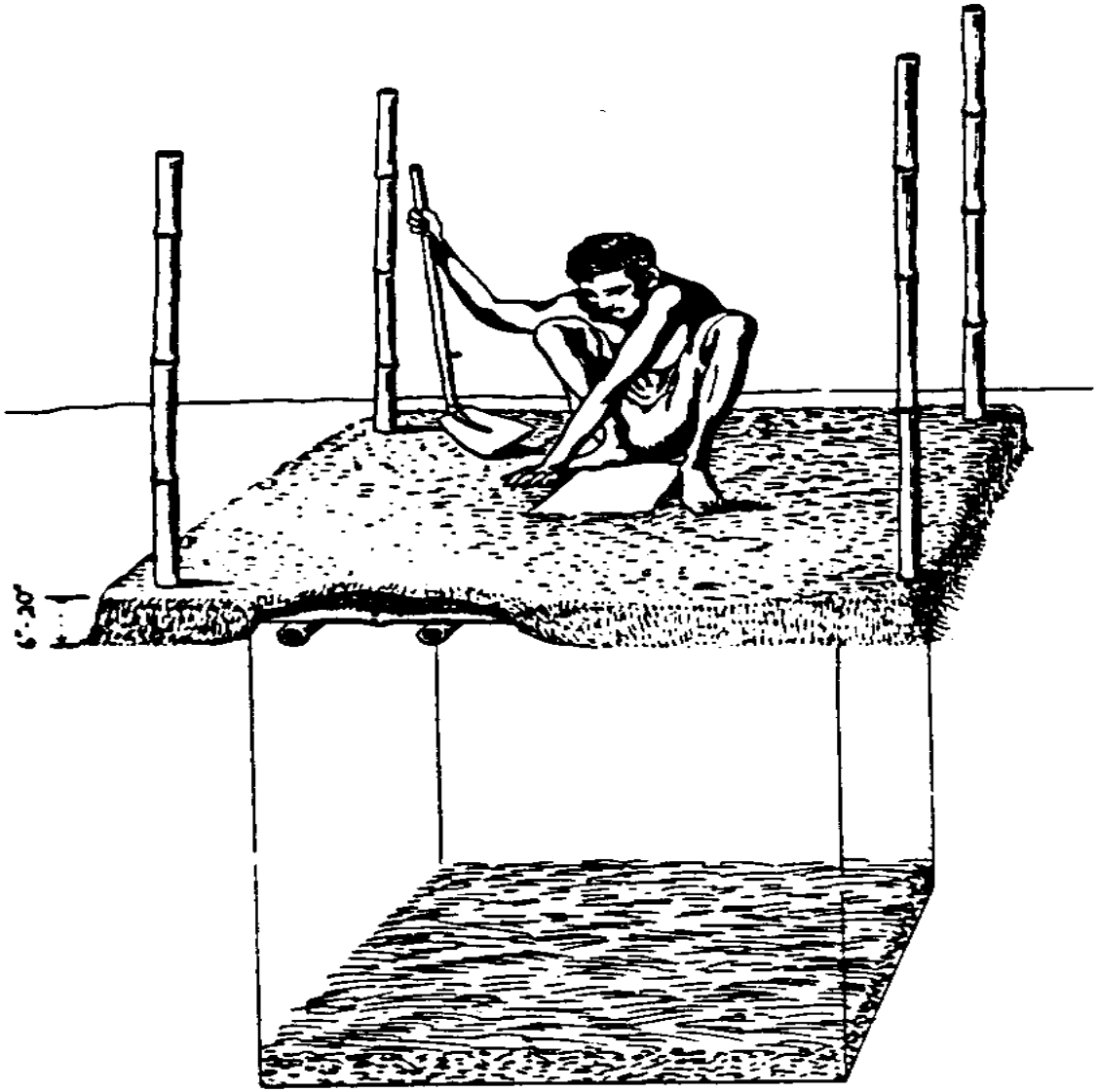


Cover everything but the floor hole with well packed earth. The floor can be raised as much as

20" above the ground, if flooding is a problem.

<FIGURE 11>

54p07b.gif (540x540)

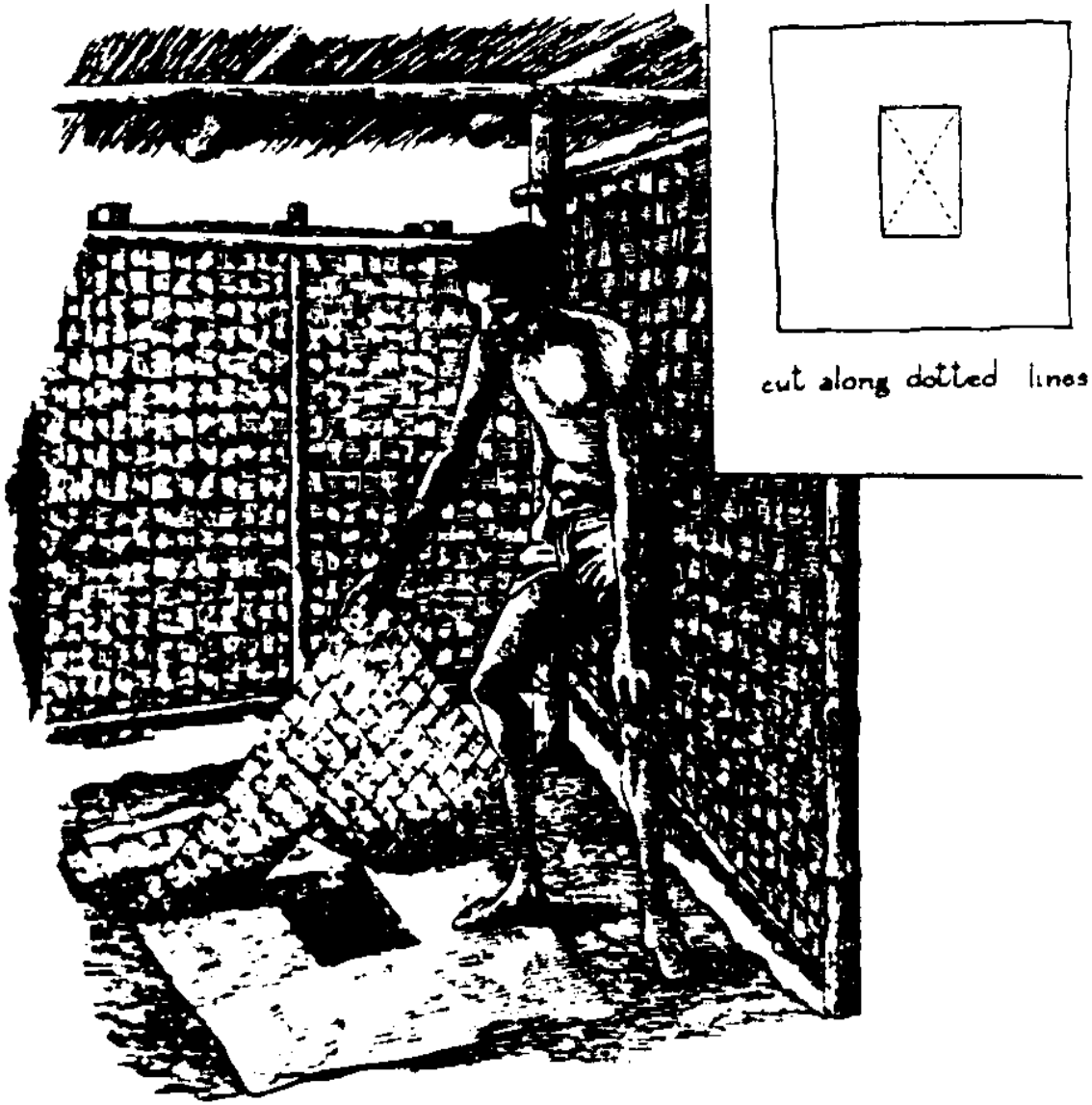


A piece of plastic such as an old fertilizer bag (opened out) can be placed

over the hole. Place a woven mat over the plastic in the middle of the floor. This will help keep the area around the hole cleaner, drier, and more attractive.

<FIGURE 12>

54p08a.gif (540x540)

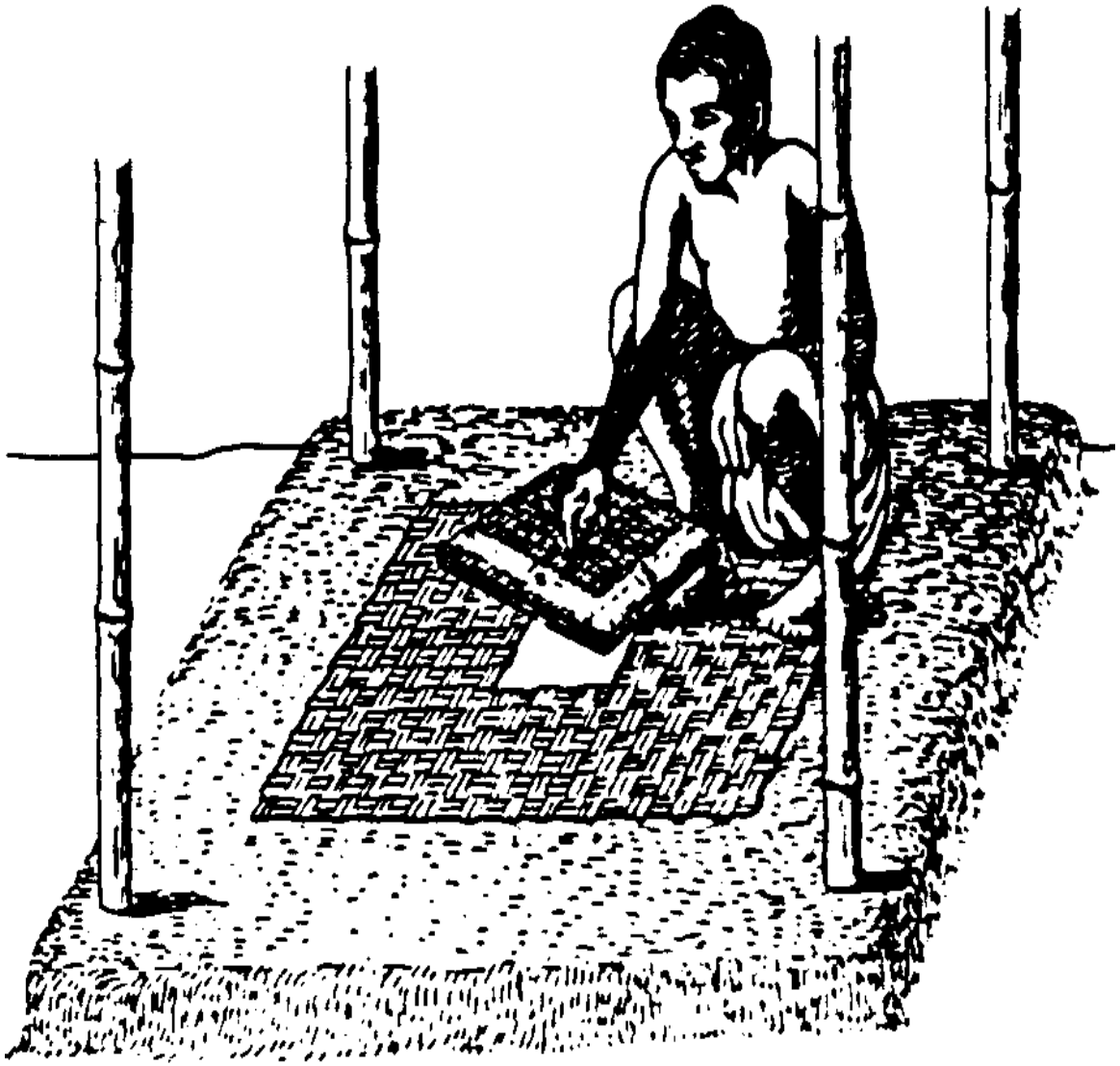


The floor hole will need a tight-fitting, fly-proof cover with a handle. You can

make this with a piece of wood or by tying together several pieces of woven mat plastered with mud or cowdung.

<FIGURE 13>

54p08b.gif (540x540)

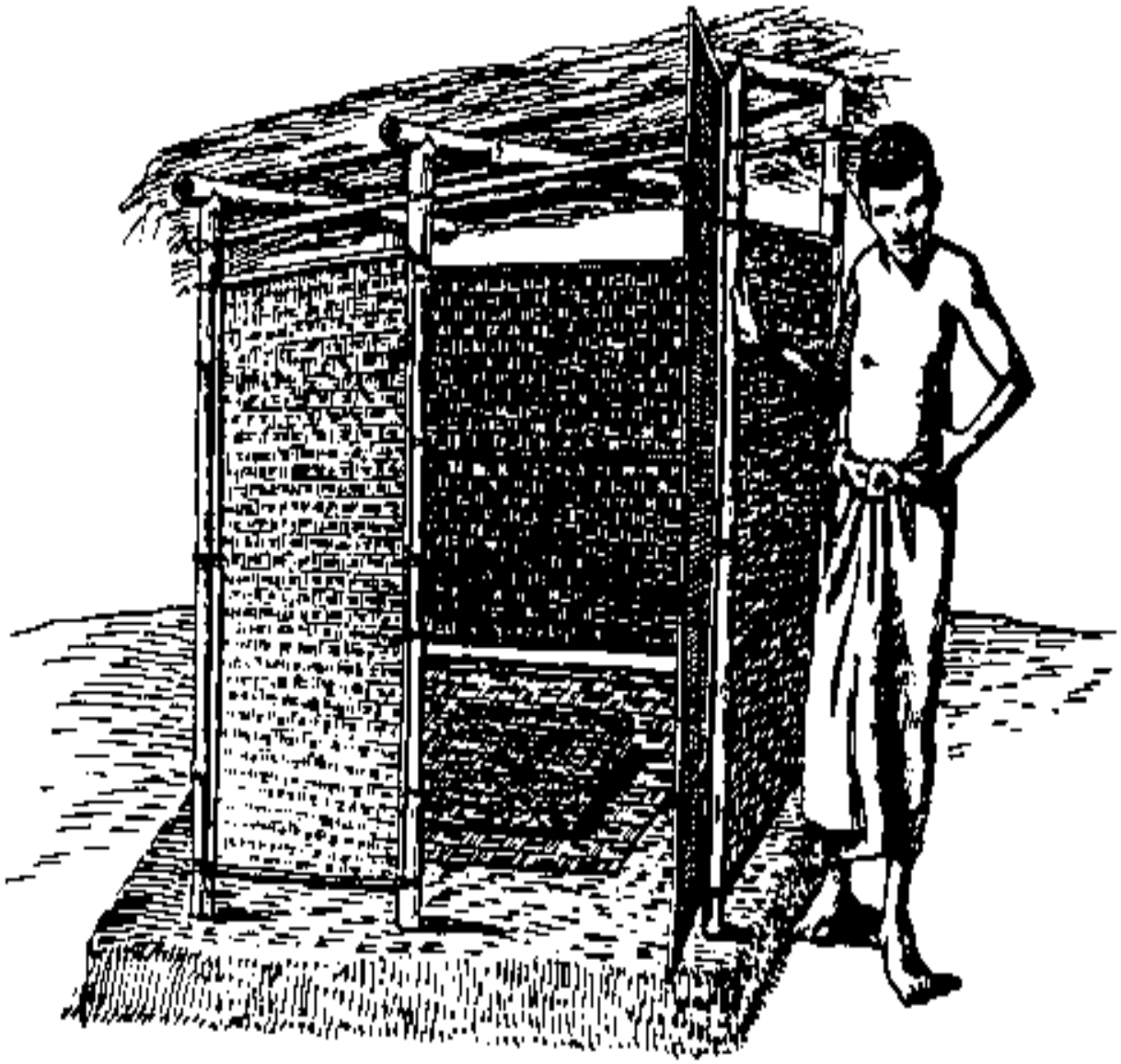


The walls (and a door, if desired) can be made with woven mats, gunny sacks, tree leaves, or long grass. Leave at least 4"

between the top of the walls and the roof to allow for proper ventilation. The roof can be made with tree leaves, long grass, or corrugated iron sheets. The composting privy is now finished and ready to be used.

<FIGURE 14>

54p09a.gif (600x600)

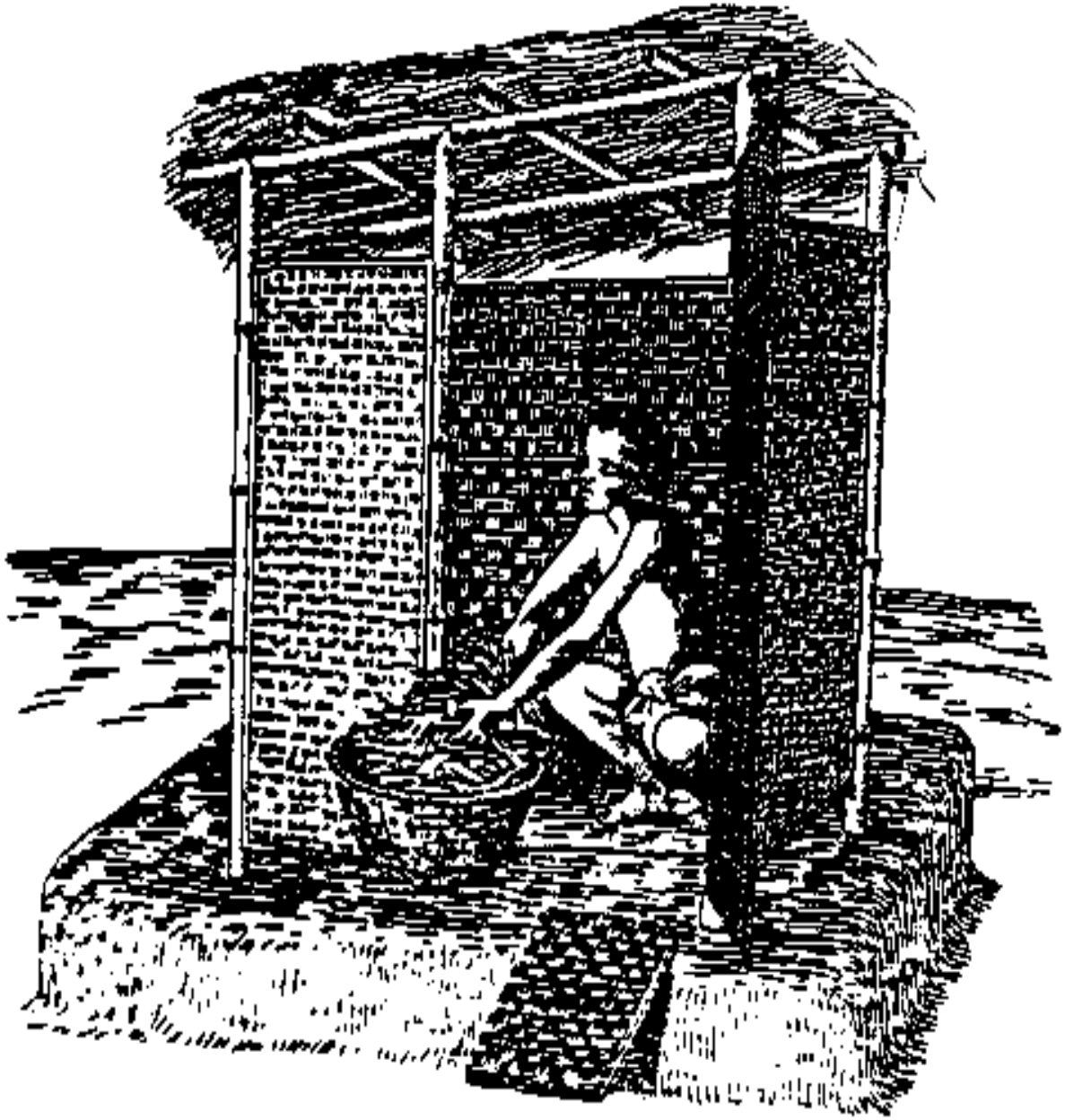


Every five to seven days, throw a few

handfuls (or more) of grass cuttings or small leaves into the pit. This simple routine will prevent bad odors and improve the pit's contents for later use as a fertilizer.

<FIGURE 15>

54p09b.gif (600x600)

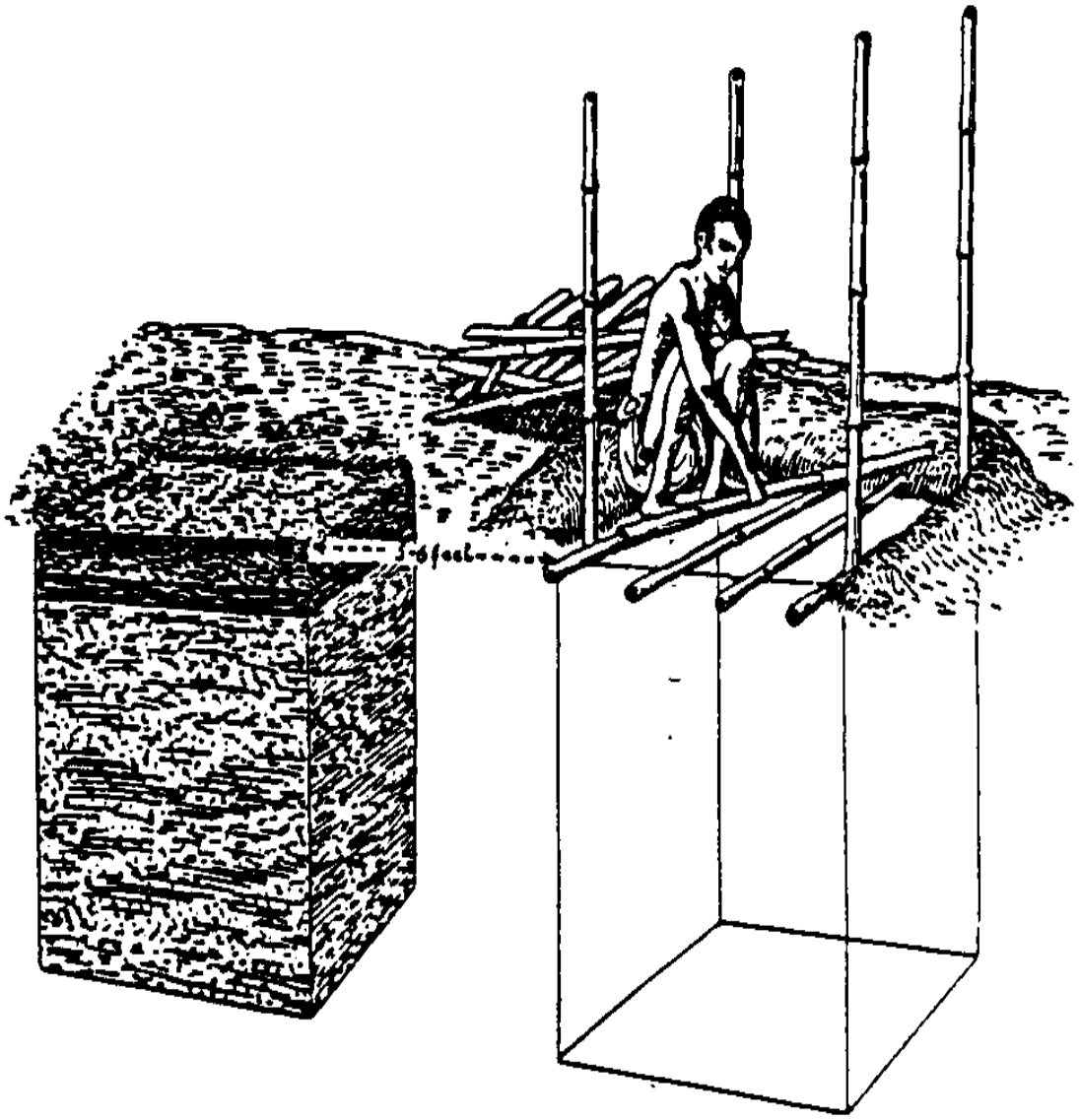


When the pit's contents reach a level

of 18" below the surface of the ground, dig a new pit at least 5-6' away and move all the old bamboo pieces over to it. Then place 6" of leaves or grass in the first pit and level it with 12" of well packed earth.

<FIGURE 16>

54p10a.gif (540x540)

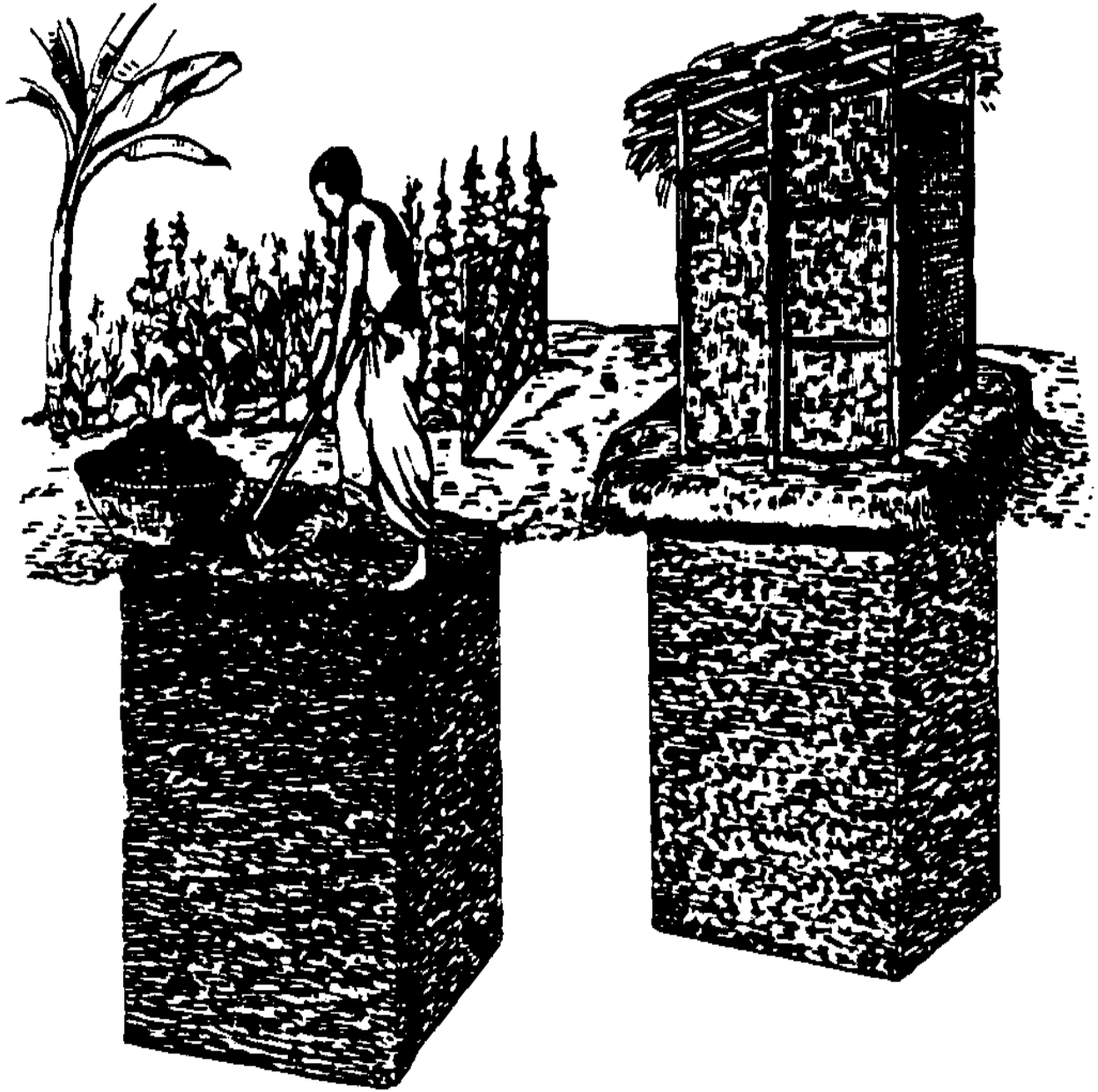


In approximately six months, when the second pit is full, the first pit can be

uncovered and the compost (fertilizer) removed. It will provide a good fertilizer that can be applied immediately or stored for later use. BUT REMEMBER! The compost will not be safe to use unless the pit has been allowed to "rest" for at least six months.

<FIGURE 17>

54p10b.gif (600x600)



IMPORTANT POINTS TO REMEMBER

1. It is good to have the privy close to the house so that it will be used, but not too close. If the privy's pit enters the ground water level, or comes close to it when the water is at its highest level, disease germs will spread to the water and endanger people's health.

2. Place the privy downhill (below) and at least 50' away from the source of people's drinking and bathing water.

3. Urine and cleansing water should be the only liquid to enter the pit. The privy is not to be used for general bathing.

4. The weekly routine of adding grass and leaves to the pit will reduce odors and improve the quality of the finished compost. Animal manure, wood ash, garbage (except plastic, glass, and metal), and urine soaked straw can also be added.

5. The cover for the floor hole is the main barrier against flies and animals that carry disease. Be sure everyone who uses the privy is instructed to cover the hole before leaving. Children must be supervised from time to time. Foot rests can be used, but the floor hole cover should be made to fit tightly between them, closing the hole completely. Removable rests (bricks or bamboo) are best so the floor mat can be removed occasionally and dried in the sun.

6. It is good to have openings at least 4" wide at the top of the privy's structural walls for airing the interior.

7. The privy structure will have to be moved when the pit is filled. This should be made easy or there will be people who will let the pit become too full. This will result in very unsanitary conditions and extra work to put the privy in proper working order.

8. The time necessary for the pit's contents to reach a level of 18" below the surface of the ground depends on the number of people using it and the amount of grass and other materials added each week. The composting privy shown in this Bulletin can be used by six to eight persons. If grass and other materials are added on a weekly basis, the pit will fill in slightly less than one year. If the composting privy is used without the addition of other materials, it becomes a simple "pit privy" and may last for three or more years.

9. For privies in markets, camps, schools, and along the roadside, the pit can be dug to a depth of 8-10'. It is also possible to make the whole pit size larger and divide the floor area into two rooms with two floor holes. At schools, separate privies are usually constructed: one for boys, and one for girls. It is important that someone take charge of placing leaves and other materials in the pit if good quality compost is desired.

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