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AGRICULTURAL EXTENSION

FLYER No. 2

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HOW TO PREPARE YOUR OWN FERTILIZER

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" C O M P O S T I N G "

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by

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P R E S E N T A T I O N

It is a pleasure for IICA-Suriname to present this flyer on composting to the farmers of the country.

This flyer as well as the next number will bring to the farmers of Suriname information which will be useful to increase their production and productivity.

This "appropriate technology" should be simple, easy to understand, and applicable to our local conditions.

IICA in cooperation with the Ministry of Agriculture will make the effort to continue this service of publications for the farmers.

Paramaribo, January 1991

Percy Aitken-Soux, Ph.D.
Representative of IICA in
Suriname



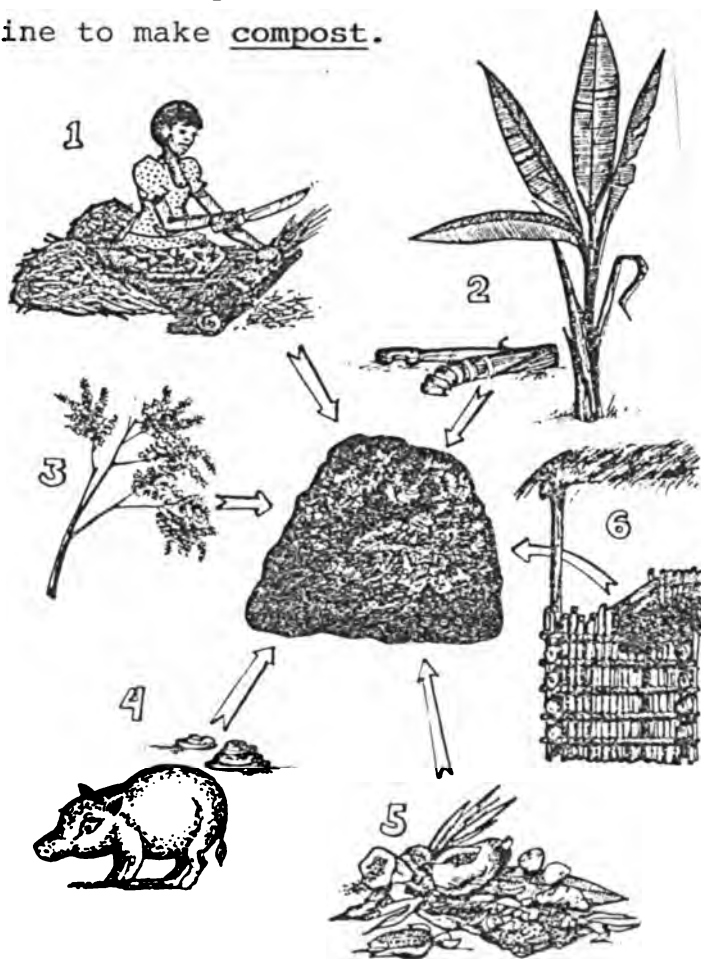
COMPOSTING ;
NATURE'S WAY TO FERTILIZE

1. Objective

Given the fact that there is a shortage of fertilizers in the country and that foreign currency is difficult to obtain as well as expensive, the farmers, specially the small ones, should manufacture their own fertilizer. How? Very easy: Let us imitate nature.

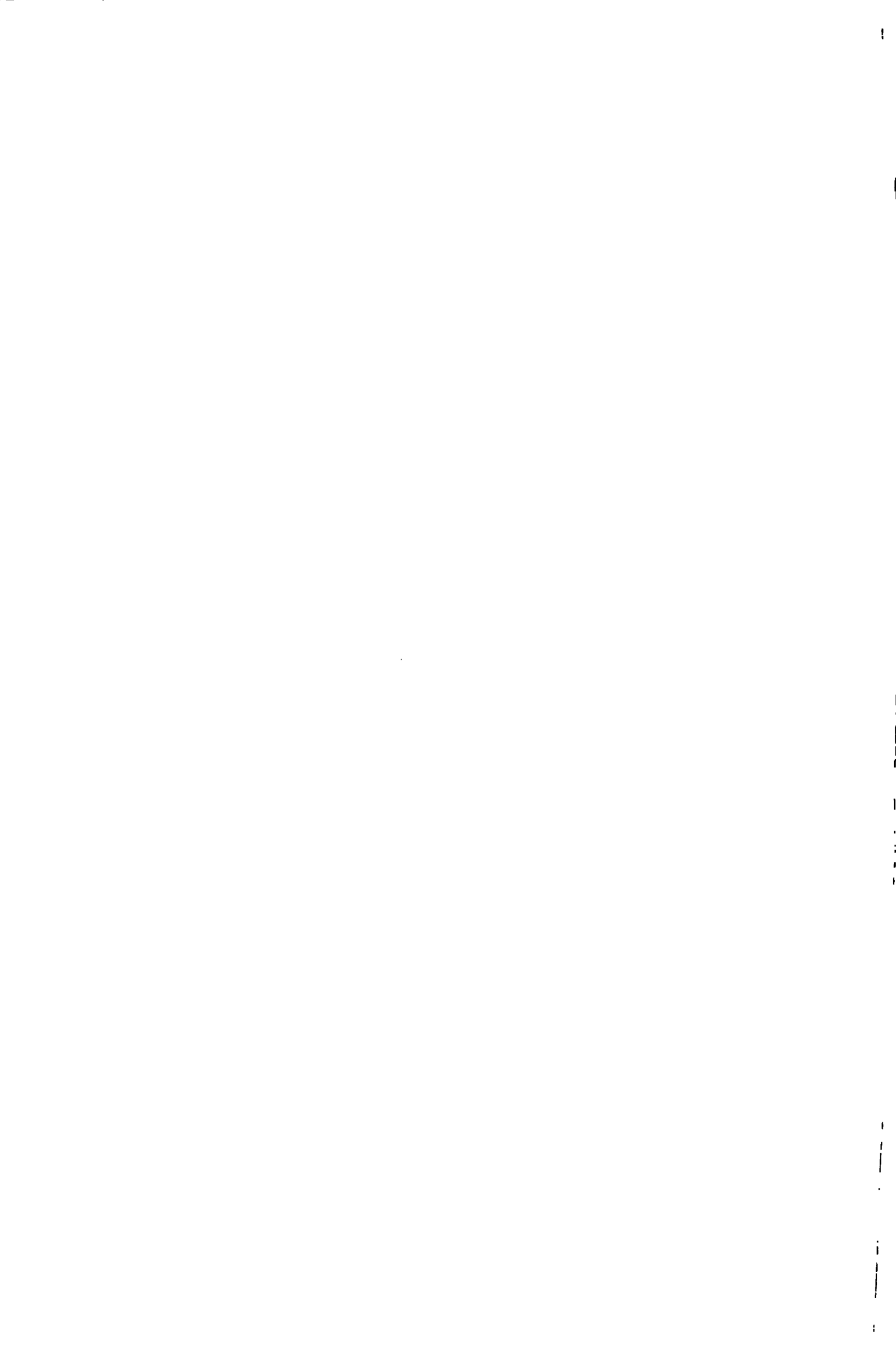
2. What are the resources the farmers have?

Plant waste, manure, household organic kitchen waste, and water. If these resources are mixed and treated the correct way, the plant material and manure decompose and recombine to make compost.



Compost production

1 Cutting of organic material, 2 Banana trunks, 3 Leaves and the branches of shadow trees (e.g. *Leucaena*), 4 Manure from animals (only necessary as starter, if nothing else is available), 5 Household organic kitchen waste, 6 Old compost as starter



When the compost is ready, add it to your land and you will see your harvests improve and become better than ever before.

Composting improves the texture and structure of the soil. It breaks hard clay soil and binds together sandy soil. In both cases it makes it easier for air and water to enter and circulate. The soil holds necessary water better and resists erosion. Compost enriches and furnishes food to the crops. Like in a store, the plants can get more food as they need it. You will see the results!!! It is a cheap way to produce fertilizer.

DO NOT BURN YOUR PLANT WASTE!!

DO NOT THROW AWAY YOUR MANURE!!

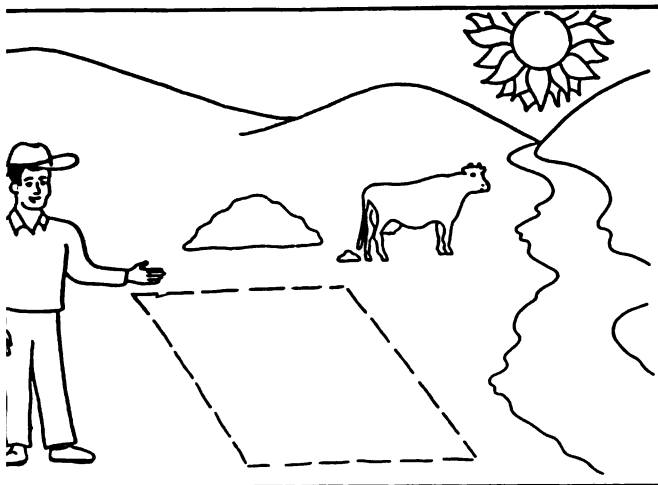
M A K E C O M P O S T !

It will take you more or less 100 days for the whole operation!

Make a scientific test!!! Apply compost to only some of your plants and see them produce much much more than the others.

It is easy and cheap to make compost.

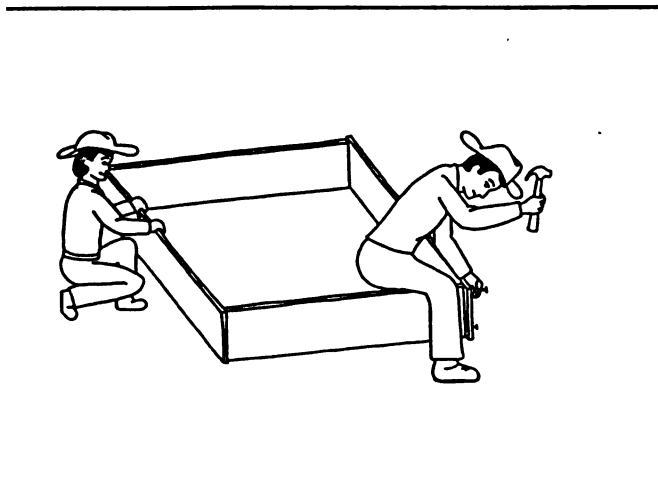
3. How to build a compost pile, 1 meter long and 1 meter wide and 1 meter high = 1 cubic meter.



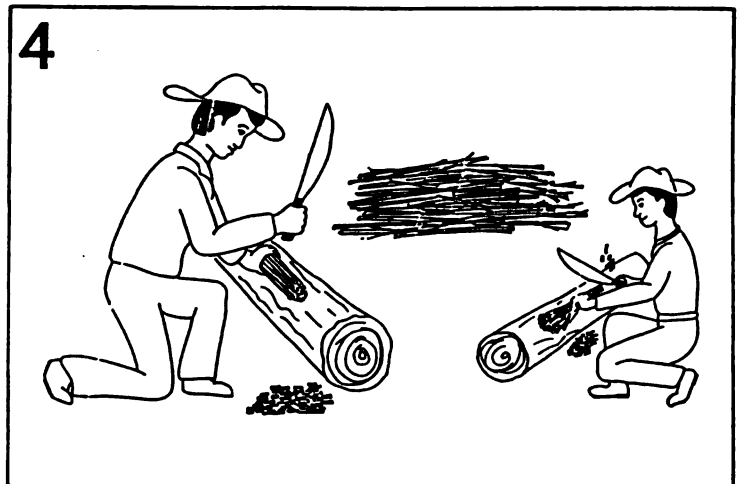
Choose a place to build the compost pile that is in the sun, out of the wind and near a source of water. The site should be close to a field or garden where the compost will be used. Hauling material will be easier if the pile is located near the animals.



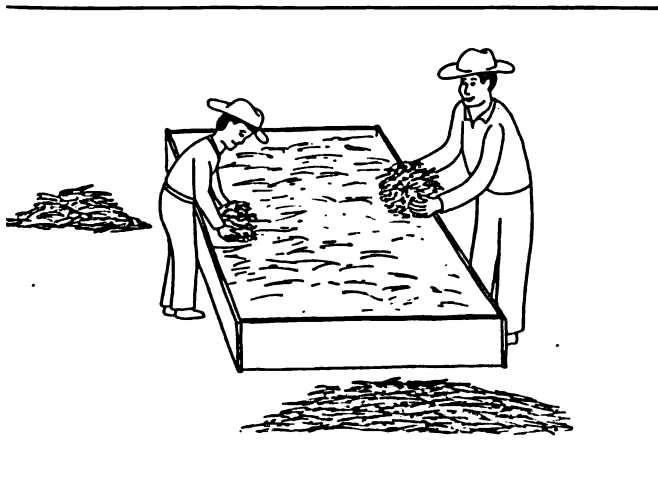
2 Collect about 1,500 pounds of plant material like crop waste, leaves, straw and weeds. We also need fresh animal manure - about 500 pounds.



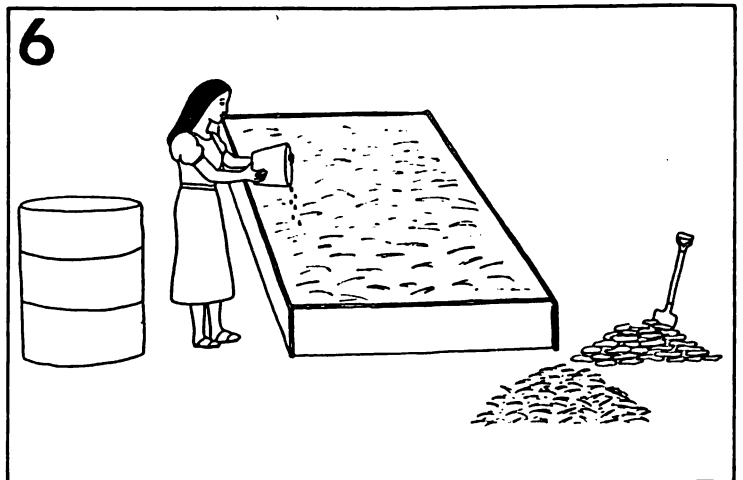
3 Make a frame for the compost pile, measure and cut boards and nails or fasten them together. Compost may also be produced in abandoned buildings, chicken wire frames or pits dug in the ground.



4 Prepare the plant materials by cutting them into small pieces. The smaller the pieces, the faster they will decompose. Loosening the ground where the pile will stand provides drainage and allows soil bacteria to work on the bottom layer of the pile.

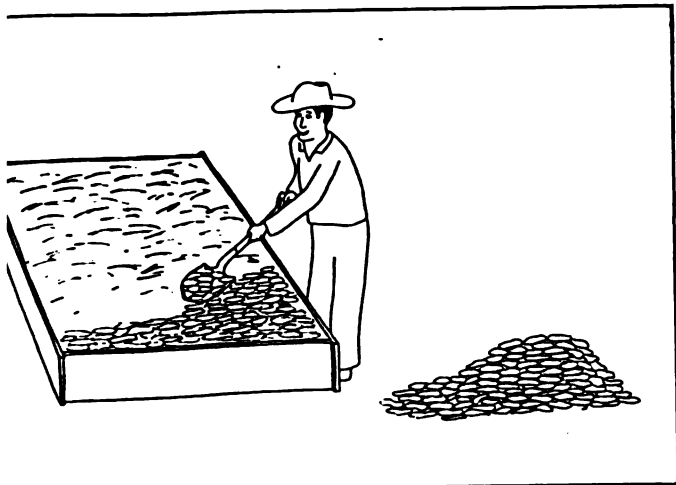


5 Make the first layer of the pile, put 8 to 12 inches of plant material on the ground inside the frame. Use as many different types of plant waste as possible. Remove stones or pieces of metal, glass or nylon, which will not decompose.

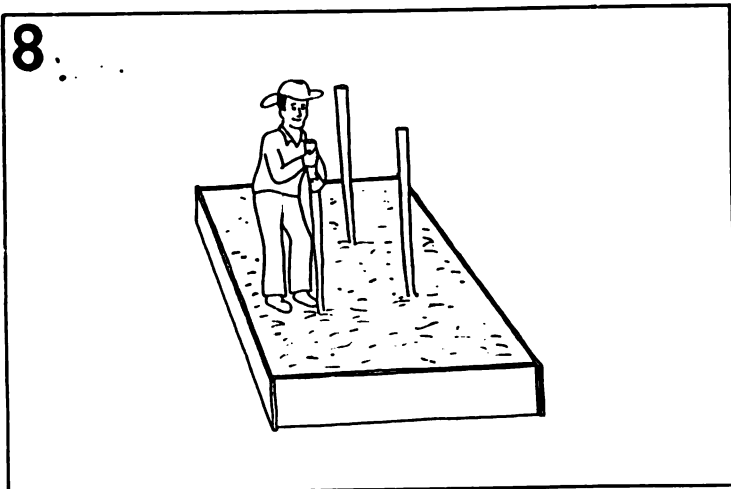


6 Pour water evenly over this first layer. 20 to 30 liters of water are needed for each square meter of green plant material. Dry plant material requires 40 to 50 liters per square meter. The layer should be about as damp as a squeezed-out sponge.

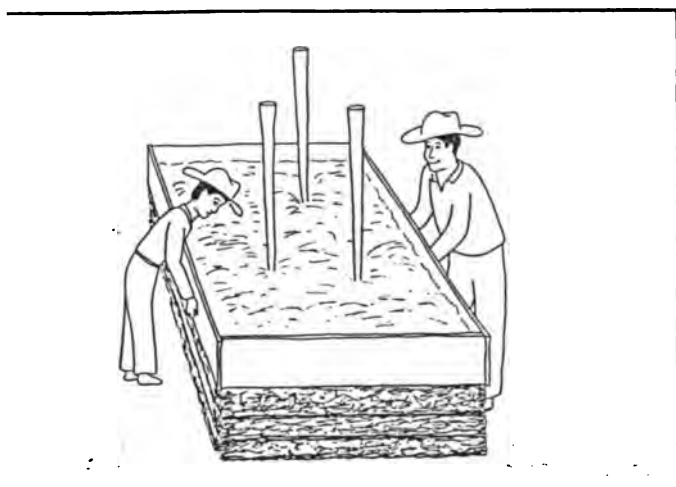
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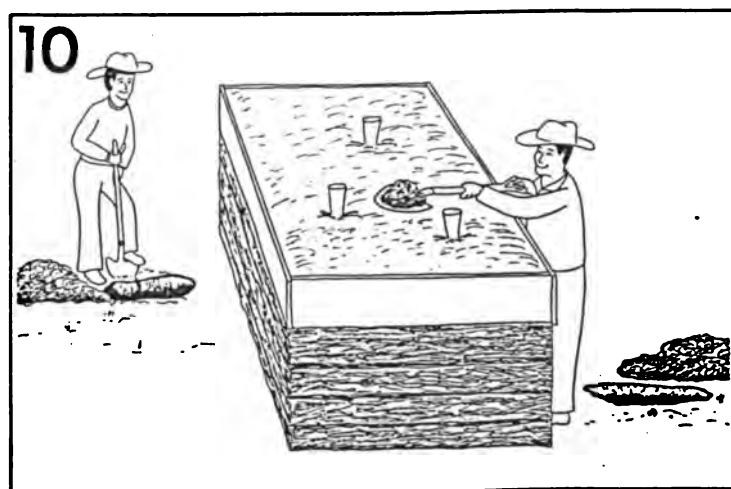
the second layer, pile 2 to 3 inches of manure on top of the dried plant material. Add 10 to 15 liters of water for each square meter of manure. Too little water slows decomposition, so much can drown the creatures which cause it.



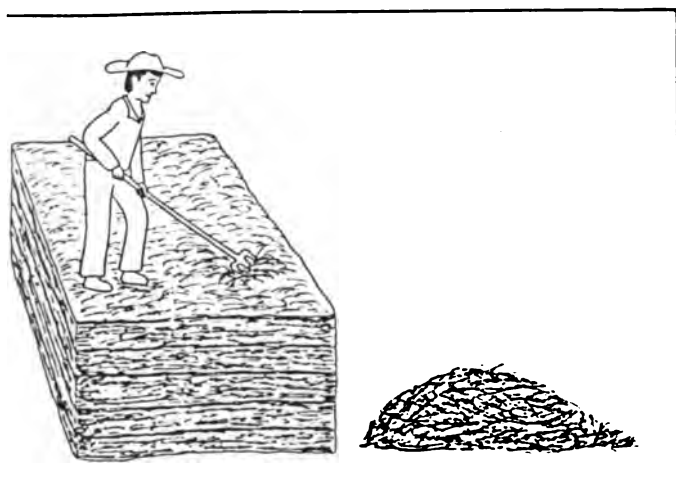
8. Place a post (with a maximum diameter of 4 to 6 inches) in approximately each square meter of the pile. This allows air to circulate within the pile. Putting the thinnest end of the post at the bottom makes it easier to remove later.



Continue adding alternate layers of plant material and manure as described in Steps 5, 6 and 7 until the pile is about 14 feet high. Apply water to each layer. Raise the frame around the compost as the pile becomes higher.



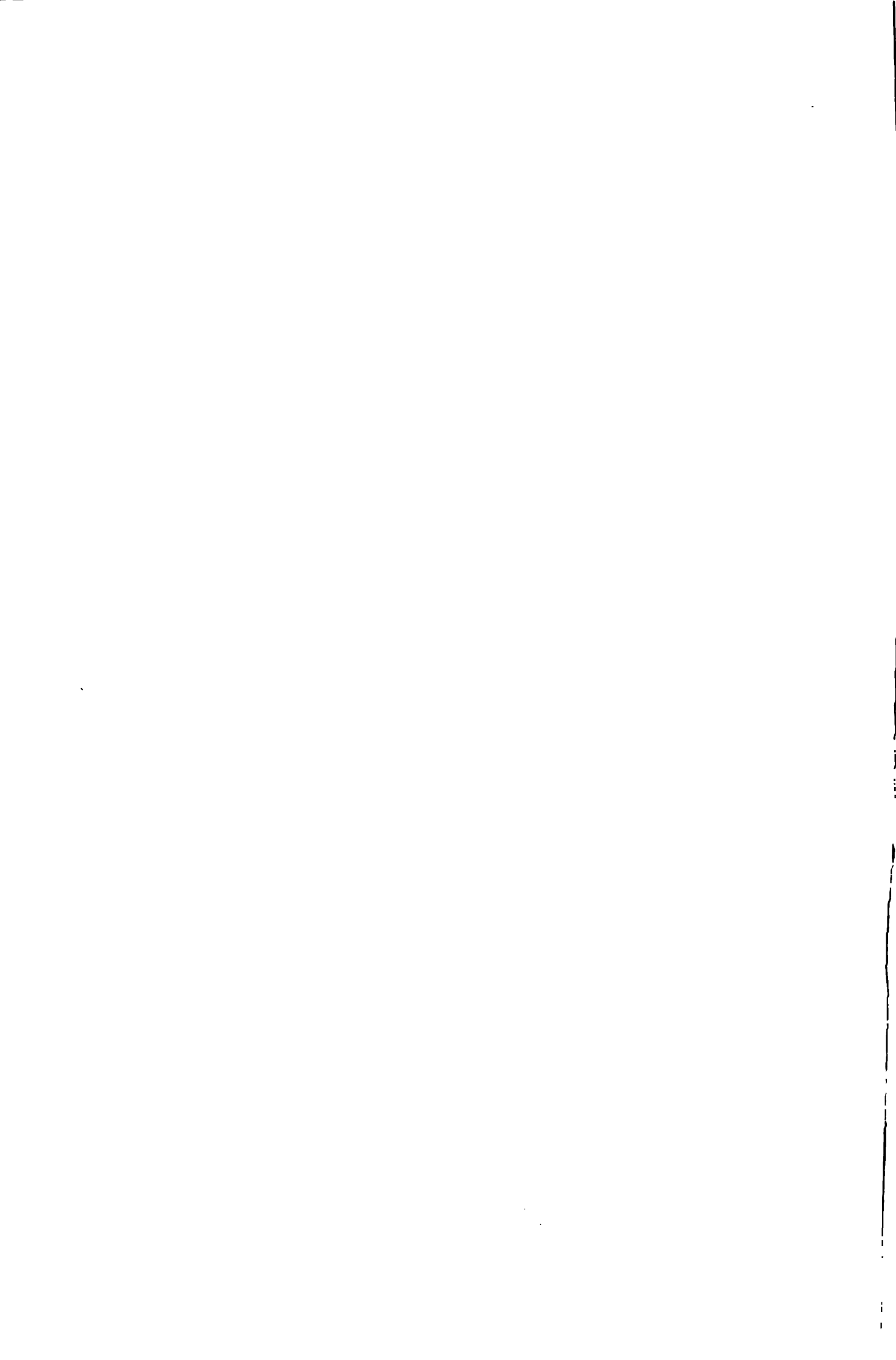
10. Seal the top layer with 4 inch of fertile soil. Protect the pile with a cover of plastic, straw or other material. In 3 days, carefully remove the posts so that the holes remain. For 25 to 30 days allow the compost pile to stand undisturbed.



At the end of this period, the pile should feel hot when you put your hand into it. Thoroughly remix and rebuild the pile, adding water to dry material, and replacing the posts. Do the same thing again in 50 to 60 days after the pile was constructed.



12. Wait another 20 to 30 days (80 to 90 days after the pile was built.) The compost pile will be 1/3 to 1/2 of its original size because of decomposition. Now you have a good supply of rich organic fertilizer ready to use!



4.- If you make your own compost pile, you do not give away your money to anybody. You save!!

- If you make your compost, the country does not have to give their foreign currency to anybody. You help the country and you help yourself.

- If you need more compost, you can make more. You do not depend on anybody or waste your savings!!

5. How do you place the compost in the gardens?

- First you prepare the garden beds

- Throw a layer on top of the bed

- Spread the compost evenly

- Work the compost with a spade into the soil of the garden bed, so that the soil is on top of the compost.

- This system benefits the roots and provides the food to the plant at the level of the roots.

- For deep-rooted crops like tomatoes, beans, and squash be sure to have it at root level.

- If the soil is on top of the compost, the rain will not wash it out.

6. If you have any questions, come to the Ministry of Agriculture (LVV), Extension Department, or the IICA-Office.

7. Bibliography

- "COMPOSTING IS NATURE'S WAY TO FERTILIZE", World Neighbors in Action. Volume 16 - Number 1E., Oklahoma City, OK, USA. 1990.

- "POUSSER PLUS DE LEGUMES", Ecology in Action. El camino real, Palo Alto, California, USA. (French edition) 1982.

