



Environmental Sanitation and Control Measures —(Contd.)

(Synopsis of Talk, given by Clarence E. Calbert, *Sanitarian, TCM*)

Section 2

2. Excreta Disposal :

Excreta disposal by water carriage or flush systems is not practical in village areas. It is possible, however, to dispose of human wastes in such a manner that danger of carriage of disease from the excreta by surface washings, soil pollutions, birds, animals and flies will be eliminated or minimized.

For satisfactory disposal of excreta the following requirements should be met :

(a) There should be no contamination of ground water that may enter wells.

(b) There should be no contamination of surface water.

(c) The soil should not be contaminated. This requirement is to prevent hookworm and other worm infections which are prevalent in some areas of India.

(d) The method used should be simple and inexpensive as to construction and operation. This applies particularly in areas of extreme poverty. The following systems are used :

- (1) **Bore hole latrine**—in areas not subject to flooding and where the water-table is not too high, usually 15 to 25 feet deep. Not suited to areas where rainfall is heavy.

- (2) **Simple septic-tank**—which may be constructed by the villagers at small cost.

- (3) **Pit latrine**—merely a hole in the ground where faecal matter leaches out into the soil. This is very inexpensive and requires no operation. When housed in some type of superstructure, it usually eliminates fly breeding.

3. Disposal of Wastes and Garbage :

This is comprised of domestic waste from kitchens, vegetable wastes, cow manure, street sweepings and other refuse. All of these things should be disposed of in a manner to prevent fly breeding and rodent haborage. The simplest and most economical way in village areas is the compost pit. (Details of preparing compost is available on request). This will enable the villages to have a source of valuable fertilizer.

4. Drainage :

The drainage of sullage from households could be accomplished by use of soakage or seepage pits. These, however, should be protected by a slab or covering. Where practical, street drainage should be constructed to prevent stagnant water from accumulating.

5. Insect Control :

The most important insect in this

connection is the malarial mosquito. Space will not permit details of its control. However, there are many other insects which can and do carry disease.

These are some of the most common :

- (a) Sand flies—tiny bloodsucking gnats.
- (b) Domestic or house flies.
- (c) Roaches.
- (d) Fleas, carried by rodents have been the principal source of bubonic plague and typhus.
- (e) Lice—carrier of typhus.

The use of DDT, Gamexane or other reputable insecticides is recommended for the control of these pests.

Note : Breeding grounds of these insects must be adequately dealt with.

D. The approach to Health Problems.

1. Find out and make use of the available public health resources in your area.

2. Determine the public health

needs of the villages in your area by reconnaissance surveys.

3. Plan your programme in accordance with those needs.

4. Measure and approach sanitary problems in their priority order of importance.

5. Learn to work as members of a community Health Team.

6. Lastly, remember that there should be no attempt to reach the unattainable, but merely make the best use of facilities that are available.

As was stated at the outset, human ingenuity must play a great part if you are to be successful. All community planning is directed toward raising the health and economic standards of the village people, so that they may live with a reasonable amount of comfort and convenience for work and leisure. These are their basic needs. It is essential, therefore, that not a single item which will improve their conditions should be overlooked or underemphasized.

(Concluded)

Can Malaria be Eradicated ? — (Contd. from page 184)

In areas where DDT is completely effective you may see mosquitoes flying about but they cannot give you malaria. That's true, for instance, in the United States. It is definitely not necessary to eradicate all the malaria type mosquitoes in order to eradicate malaria. But we must kill all the infected mosquitoes.

DDT has proved very effective in the past, but what about the future ?

There is an urgency today about malaria eradication. Insects are revealing a disconcerting ability to develop resistance to the new insecticides. For example, houseflies in many areas can no longer be killed with DDT. In a few cases, malaria-type mosquitoes are also resistant. Apparently, it takes six or seven years for the malaria-type mosquitoes of an area under continuous spraying to develop resistance.

Consequently, if we eradicate malaria

in five years, as is possible in many countries, we may be pretty sure that we can end the spraying safely before resistance appears.

If, on the other hand, we dawdle along, trying merely to reduce the amount of malaria rather than to eradicate it, then there can be no practical end point to the spraying. It must go on and on indefinitely. Very likely mosquito resistance will develop. Then it will be necessary to fall back on more expensive methods; still with no end to malaria in sight.

Undoubtedly, now is the time for maximum co-operation to eradicate malaria from wide areas. We have cheap, effective methods, international aid is available to countries that plan for eradication, and governments have considerable enthusiasm for the idea.

Whereas formerly many communities could not afford to control malaria, now they cannot afford not to eradicate it.