World Health Day
April 7, 1956

"Destroy Disease Carrying Insects"

Many diseases cannot be spread without insect vectors. They are among the most ancient afflictions of mankind and have played their part in shaping his history. Malaria has influenced the rise and fall of civilizations. Epidemics of plague and of yellow fever have again and again decimated populations in the old and the new worlds, while outbreaks of louseborne typhus have often determined the outcome of military campaigns. Sleeping sickness and the less well-known disease onchocerciasis have held back progress on the African continent.

These and a score of other diseases carried by flying and crawling insects have enfeebled whole sections of the human race, depopulated fertile food-producing tracts, and held down man's levels of living particularly in the tropics but also in temperate climates. Despite the strides that have been made in our own day towards the control of many of these scourges, there is scarcely one which does not still represent an actual or potential danger to large numbers of human beings.

Most of these diseases have been known and feared for centuries, but it was only in the early years of the present century that painstaking research established with certainty the part of many different species of insects, such as mosquitoes, tsetse flies, sandflies, fleas, and lice, as well as of ticks, and mites, in transmitting a great number of pestilences.

In the first flush of enthusiasm following these discoveries it was thought that, once the carrier was known, any disease would be virtually conquered.

Indeed, in a relatively short time yellow fever was banished from most of the cities of the Americas. The incidence of malaria was reduced particularly in the towns and in the more temperate zones, and certain other diseases were successfully attacked.

Rapid progress, however, became possible only after the discovery during World War II of the "residual" insecticides, of which the best known probably is DDT. The special character of these chemicals is that they remain deadly for periods ranging up to several months after application. One of their first triumphs was to strangle the threat of typhus epidemics during and after the war. Next, they proved amazingly effective when correctly used to control malaria, even in the sparsely settled rural districts. There is scarcely an insectborne disease against which these new chemicals are not being used today with greater or less effect.

But again disappointment has followed too optimistic hopes. First, the common housefly and now some mosquitoes as well as lice, cockroaches, and bedbugs in certain areas have shown that, after a few years of exposure, they can develop resistance which protects them from fatal effects. For the housefly, resistance occurs rather quickly, and these chemicals have therefore become of little value. With the mosquito, however, the insecticides can be used effectively for several years. During this period an all-out campaign can eradicate diseases such as malaria.

It would be a serious mistake to underestimate insectborne diseases. It is already clear that the residual insecticides, powerful weapons though they be, do not provide the final answer to the disease-carrying insect.

World Health Day this year will, I hope, serve to make people everywhere realize that, although the insectborne diseases are being increasingly held in check, they are not yet conquered. To achieve that final victory, man will need all his intelligence and resourcefulness. Above all, he will need to act in concert, for this group of diseases constitutes one of the greatest challenges to international health action.

—By M. G. CANDAU, M.D., *Director-General, World Health Organization* (abridged statement).