

You Can Help To End The Fly Menace

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In most languages and in most countries flies and filth have become synonymous with disease.

Flies thrive on filth and they abound wherever it is found. When flies and filth are common, certain diseases are almost certain to be prevalent. Houseflies, in particular, are responsible in many parts of the world for much human suffering, infirmity and even death.

Flies have established themselves in every part of the world inhabited by man, although they are found in greater numbers in the tropical, sub-tropical and temperate areas.

The common house-fly, breeding in filth and feeding at your table, is a cause of human suffering throughout the world.

"It is not enough to wait for health authorities to start a fly-control campaign. While they have their role to play, success as a whole will depend on how far each individual is prepared to co-operate by permanently removing places where flies breed."

Of the many hundreds of varieties of flies the house-fly is the most intimately associated with men. It breeds in man's faeces and in the filth he leaves around his dwelling. It shares his home and feeds with equal readiness on his food, his faeces, his garbages, his sores and lesions and is equally at home on similar products of his domestic animals.

This ready appetite of the house-fly for both filthy and clean foods, and its unpleasant habit of moving

rapidly back and forth between them, makes it a deadly enemy of man.

House-flies are proven vectors of human diseases such as dysentery, diarrhoea, severe eye inflammations, typhoid fever and cholera, and have been shown under laboratory conditions to be capable of the mechanical transmission of many others.

The role of flies in the total transmission of some of these diseases, such as typhoid and cholera, is minor as compared with other more important sources of infection, such as direct food and water contamination. In others, such as diarrhoea and dysentery, house-flies have been proved in certain circumstances to be of equal or greater importance than other means of transmission.

This fact has considerable significance when one considers that in some parts of the world these intestinal diseases are the leading causes of death among infants and very young children.

In some areas eye inflammations and trachoma, diseases with which the fly is closely associated, rob man of one of his most priceless possessions short of life itself—his eyesight.

The overwhelming tragedy of this situation is that it is absolutely unnecessary.

We know that flies are wholly or partly responsible for the transmission of a number of important diseases. We know enough about their habits to be aware that they can be controlled effectively by sanitation,

supplemented by the judicious use of chemicals.

Yet it may safely be said that we are making very little progress in the control of fly-borne diseases in the greater part of the world. We seem to be unable to place the fly in its proper perspective and then to act emphatically and specifically.

There can be little doubt that if the babies or young children in any country were being blinded or killed by human enemies, that country would place no limitation on the national effort which would be made to halt such enemy activities. Yet we frequently become hesitant and ineffective when the enemy is the fly.

We should cease treating the fly as no more than a nuisance and recognize it for what it is—a deadly enemy, which strikes at man, woman or child with equal severity.

Improved sanitation, including the correct disposal of sewage, garbage, animal excrement, and industrial wastes in which flies can breed, should be the first step in fly control. If this is not done failure is inevitable. These are expensive measures, but in the long run they often prove to be the most economical, particularly if the cost is compared with that associated with human sickness and misery.

Insecticides should be used only as a supplement to, *but never as a substitute for*, sanitation.

In those instances where an attack has been made by man on the fly using only chemicals it has proved to be a doughty adversary.

A few years ago, with the advent of DDT, BHC and other insecticides of the group known as the chlorinated hydrocarbons, it was thought that a weapon had been found which would control, if not completely eradicate the fly.

However, our original high hopes have been sadly disillusioned. The fly rallied quickly and effectively from the first attacks with those

insecticides by developing a resistance to them, and in most places where DDT, BHC, chlordane and dieldrin have been used on a large scale, resistance has been developed to a degree that has made their use relatively ineffective as a single means of control.

In those areas where the chlorinated hydrocarbon insecticides are still effective against house-flies, it seems reasonable to assume that it is only a matter of time before they too lose their effectiveness.

An encouraging development in the field of insecticides has been the discovery of the organic phosphorous compounds. These have proved to be effective in controlling all flies including those that have developed resistance to DDT, BHC and the other chlorinated hydrocarbon insecticides, and there is as yet little evidence of any resistance becoming manifest to them, even after several years of use.

However, the organic phosphorous insecticides do not have the long-lasting residual effectiveness once obtained with DDT. A few weeks of control of flies is the best that has yet been obtained with a residual application of any of the available organic phosphorous compounds. In addition, the high cost of such applications make them impractical for general use in fly control.

Longer periods of effectiveness, ranging up to several months, have been obtained in Denmark, the United States and Switzerland with the use of gauze or cotton cords impregnated with organic phosphorous insecticides. However, the use of this technique also has limitations.

The organic phosphorous compounds have been used with good results in poison baits, as larvicides and as outdoor sprays. The disadvantages of these techniques are the high cost of frequent and repeated applications and the limited situations

in which they can be recommended.

It is also important to bear in mind that this group of insecticides is much more poisonous to man than many of those we have been accustomed to use with few or no protective measures. This factor has a marked limiting influence on their general application.

While our experience in the control of house-flies during the past decade has been discouraging, there have been instances when a concentrated and well-planned effort has brought about most satisfactory results.

These have indicated clearly and repeatedly that, provided the correct methods are employed, man can control the house-fly. They have also shown that in certain circumstances, fly control has brought about the reduction or control of some diseases of man.

In a number of cases where flies have been controlled for the first time in the experience of the population, and the benefits that have thus been brought about have become apparent to everyone, a "fly consciousness" has been developed and with it a desire to enjoy freedom from flies permanently.

These experiences have also taught a lesson to health and other authorities that fly control cannot be achieved permanently by insecticides alone.

One of the health tragedies of our times is that too frequently reliance has been placed entirely on insecticides and that even token efforts at control through sanitation have been abandoned in favour of chemical control.

There is no doubt that insecticides have played and will continue to play an important role in the control of many diseases wholly or partially transmitted by flies, by reducing the numbers of flies at critical periods of disease transmission, but this role must be clearly defined.

In any battle a variety of

armaments is usually needed; yet man in his struggle against flies has been guilty of failing to observe this rule and in failing to use his most effective weapon—sanitation.

One can never be sure of success when complete dependence is placed on insecticides—*sanitary measures on the other hand, when properly applied, have never been known to fail in bringing about effective fly control. It is the one measure to which flies have never developed resistance.*

The sanitary disposal of organic wastes in which flies can breed does not mean that these rich materials should be destroyed or lost through burial, burning or dumping into large bodies of water.

Many fruit and vegetable wastes which once produced large numbers of flies are now being used for the manufacture of products useful to man.

Composting is a science still in its infancy, but its development into an economic and practical method of waste disposal acceptable to farmers throughout the world will certainly have a marked influence on the advancement of mankind as a whole. However, much more research is required in this field.

While such research is important it is just as important to make people realize that many of the methods by which we can control flies are not being used.

Simple sanitary practices, if adopted by everyone, will bring about immense reductions in the number of flies in those areas where they represent a health problem.

Let us put into practice good sanitary measures—measures that have been proved to be effective against flies. Then let us supplement these with the use of insecticides, as they may be needed, and seek new and more efficient methods for the handling and utilizing of organic wastes for useful purposes.