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## AGENCIES FOR THE SUPPORT OF RESEARCH IN MOSQUITO CONTROL

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As the country has been gradually changing over from a predominantly rural environment to a city and suburban one, the technical problems of mosquito control have in many cases been changing also. But the problems to be met have not been the same in all states, nor have they changed equally in all states. Nearly everyone would benefit by more research in mosquito control, especially the following groups:

1. Mosquito Control Commissions and Health Departments which are now carrying on, or may in the future take up mosquito control work. Benefit to them would come through improved techniques and greater knowledge.

2. The important pest control industry and the insecticide manufacturers industry would benefit through improved methods, techniques, and information, and testing of insecticides, including data on the current local status of resistance of mosquitoes to insecticides. Mining interests would benefit through greater knowledge and better methods of mosquito control on mine property, where breeding is sometimes a real problem.

3. The great army of picnickers, campers, boaters, and outdoor clubs would benefit through information resulting in better individual protection from the annoyance of mosquito bites and other insect nuisances. The hundreds of thousands of home owners, farmers, members of garden clubs, and community groups would benefit in the same way, as would the fishermen in the states who would welcome more freedom from mosquitoes and biting gnats.

4. The conservation and wild life groups in the states as well as the State Departments of Forests and Parks, are interested in studies on the biology and control of pest insects in relation to the very active programs for stream pollution control and clean waters. It is recognized that certain types of pollution may greatly increase the breeding of some of the most common pest mosquitoes.

5. The real estate operators and home builders associations, recreation departments, camp operators, and Chambers of Commerce would all benefit through improved control methods resulting in reduction of insects affecting comfort and

health of residents, and through the increased attraction of satisfied vacationers and industry into the particular area.

Assuming, then, the advantages of sound technical research in mosquito control problems, especially on the state or local levels, the question of the agency or agencies to carry on the research arises. Who is to do the job? Here there is great diversity.

In many states the state universities and affiliated experiment stations are responsible for the technical research on mosquito problems. In my state of Pennsylvania, legislation is being introduced to set up a branch experiment station by the State University. Many other states depend largely on federal agencies such as the U.S.D.A. or the U.S.P.H.S., both of which agencies are prepared to help local authorities in all sections. Florida and Nebraska look primarily to the State health departments for support of research. The Northwest Mosquito Control Association (Oregon and Washington) also has close relationship with the state health departments. In California research is done by both the University and the State Health Department.

With malaria passing out of the picture, and when mosquitoes are reasonably well under control, there may be a loss of public interest in research, and people forget that mosquitoes can transmit other diseases, as well as affect our comfort and welfare. However, we should point out that we do not know which of the so-called "pest" mosquitoes may later be found to transmit disease. The point is that we should continue to keep up public interest and support by *all* means possible, for there is plenty of work for *all* agencies and individuals, and that the real need is to promote the fullest cooperation among them.

The ultimate purpose of this discussion is to point out a type of agency that may help in originating and promoting this essential public interest and support. Because of the fact that mosquitoes are often long distance flyers and can fly over state, county and municipal boundaries, a *regional* approach may be advantageous. Such a regional, non-profit organization is the Delaware Valley Council, which has helped in this way in Pennsylvania, southern New Jersey and northern Delaware. The Delaware Valley Council, made up of representatives of commerce and industry, agriculture, top public officials, realty, resort and recreational interests, and the various publicity media of the region, has helped to stimulate mosquito research and control, with good results. Through direct educational leaflets, the press, radio and television, and local meetings, the homeowner has become acquainted with the problem and what he can do on his own premises to control mosquitoes, as well as the broader programs for the whole region, including the establishment of the proposed State University Research Station in Pennsylvania.

Although the results cannot be definitely measured, the amount of money spent gives some indication of the interest aroused and the results the Council has been able to help achieve. In 1959 in the fourteen counties in the area, only eight had been doing any organized mosquito control work, with expenditures of about \$500,000.00 yearly. By 1962, organized control work will be carried on in thirteen counties, with budgets—state, county and local—of \$2,000,000.00. With the helpful backing and sponsorship of an organization such as the Delaware Valley Council, good results might similarly be secured for the benefit of all the people in any region.