

SYMPOSIUM ON CONTROL PROGRAMS FOR BACKYARD MOSQUITOES

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- T. W. MILLER, JR., Publicity and Public Relations for Backyard Mosquito Control Problems
- G. T. CARMICHAEL, Backyard Mosquito Control Inspection and Problems as Found in the Southern United States
- A. W. BUZICKY, Backyard Mosquito Control Inspection and Problems as Found in the Northern United States
- A. F. GEIB, The Importance of Recording and Cataloging Backyard Mosquito Control Problems
- G. C. COLLETT, The Responsibility and Training of Personnel for Backyard Mosquito Control
- R. L. VANNOTE, Working with Other Agencies on Backyard Mosquito Control
- J. W. KILPATRICK, Basic Equipment and New Tools for Backyard Mosquito Control as Used in the *Aedes aegypti* Eradication Program
- R. A. HEDEEN, Effective and Safe Use of Chemicals and Biological Agents for Backyard Mosquito Control
- R. E. DORER, Source Reduction in the Backyard
- O. V. LOPP, Other Insects Related to Backyard Mosquito Control

The speakers not only emphasized the important points, but also mentioned subjects that were typical of specific areas as well as special circumstances. Some of the points were mentioned by more than one of the speakers as well as in the general discussion from the attending group, thus emphasizing their importance.

The opinion was offered that public education should be considered public relations, and that the general citizen groups can be catalogued into, *first*, those who know about the program and are in favor of it, *second*, those who are actually against it and, *third*, those who are apathetic and have no interest whatsoever. Transmitting information; getting together with frictional groups and understanding each other's problems; brochures, exhibits and TV appearances are only a few of the points that were brought up during the symposium. However, it was mentioned that the responsibility for backyard mos-

quito control must go back to the property owner. After all, it is his house and property, and mosquito control districts should keep their scope of interest within the boundaries of public property and large mosquito breeding sites that affect large populated areas.

The various sections of the United States do have different problems. For example, the south has a longer mosquito control season than the northern group of states, and the domestic or backyard mosquitoes are a bigger problem in the south because of the extended breeding season. Certain parts of the south have been assisted during the past few years by the *Aedes aegypti* Eradication Program. There is no substitute for a comprehensive survey within mosquito control districts, listing primary and secondary sources. If the primary source is eliminated, then the secondary and related mosquito breeding sites can be held to a minimum.

It was pointed out that even in the north there are differences not only of mosquito

* Resumé, prepared from taped recordings.

complexes such as the *Culex pipiens*, biting or nonbiting, but in the northern area from the east to the west the *Aedes* species have a difference of emphasis, probably chiefly because of the encephalitis problem as it relates to the health of the people involved within a given mosquito control area. *Aedes tarsalis* is of course important in the west. *Sticticus* and *triseriatus* are taking their place on the list of important vectors of encephalitis in some areas. It was also mentioned that in many states commercial sprayers or pest control operators are doing more mosquito control than they have in years past. This particular group of professional insect control people continue to use DDT because of its long residual effect. However, more and more of the mosquito control districts are becoming aware of the benefits to be gained when using the less persistent insecticides.

Emphasis was given to the point that in giving advice to people, it is important to let them know that in the first week or ten days of emergence of a brood of *vexans*, these mosquitoes are on the wing, moving constantly, and then homeowners cannot expect to get a long residual on any single application; that after ten days the brood stabilizes in the taller grass and shrubs or they are declining in age, and they are likely to get a more effective control if an application is made during the midpoint after a brood flight.

The speakers emphasized the need for constant routine surveillance and larviciding. There is no substitute for an early re-evaluation and inspection of areas, because in many cases the homeowner continues to create his own mosquito breeding site. Also by the reinspection, foremen as well as the control inspectors or operators become acquainted with recent changes in mosquito breeding sites, whether urban or rural.

All mosquito breeding sites have to be documented by one means or another, and these records have to be kept current. Wherever source reduction by water management is possible, it should be used.

Daily reports of larval infestations and a spray crew report of larviciding are only some of the records necessary to a successful mosquito control program. District maps of various scales are most necessary for locating catch basins, swimming pools, fish ponds and any one of the other many mosquito breeding sites.

In most districts, the general public is urged to report the presence of mosquitoes and they are entitled to request assistance in the elimination of these mosquitoes within their district. By personal contact with property owners and by creating good public relations, a mosquito control district often can gain a friend and a helper, if the property owner is told of a mosquito breeding problem on his property. It was emphasized that commercial or industrial properties have backyard mosquito control problems also, and that districts should include them in their inspections. Furthermore, control agencies can work cooperatively with health departments and fire departments on inspection information. Some service requests go to health departments if cooperation between the district and the health department is necessary. Police should be notified when an inspection campaign is underway in case householders call regarding unidentified persons on their premises. This statement only emphasizes the need for uniforms, badges, or at least a letter of identification; also properly marked vehicles.

It was noted that, generally speaking, voluntary personnel on inspections have not been satisfactory during recent years, in spite of the good intentions of Chamber of Commerce groups as well as Scout programs. There are complications concerning workmen's compensation and insurance for nonpaid personnel who may be exposed to dog bites, wounds from rusty nails, etc. Properly organized mosquito districts have found the best way to do things is to do them yourself.

It was emphasized that the *Aedes aegypti* program has shown the need for, and usefulness of block by block, area by area

inspections. In this program emphasis has been on the development of new tools as well as techniques and, generally speaking, various formulations of DDT are used. The use of Abate and malathion are proving of benefit in this program.

It was mentioned that some mosquito control districts have received as many as two hundred phone calls in one day and under improved programing these service requests were cut down to two hundred and fifty per year. Most mosquito control districts use a service request form which documents the action taken and a notice to the householder.

It was the general opinion that the success of the control program depends to a large degree on the quality of work performed by the individual members of the crew. This is true regardless of the size of the program or the complexity of the problem. Therefore a training program is necessary to equip employees with the skill and knowledge they need to effectively carry out the mosquito control work. By this training, the mosquito control district makes the employee familiar with the practical aspects. He is impressed with the importance that he has as part of the program. He should be taught to meet the public and to talk with the individual citizen but not to get too involved in a subject that perhaps he does not know enough about. There was also discussion concerning the attitude of college students who were employed during the summer, that their employment was, in a sense, a vacation. This of course cannot be tolerated in a successful program.

It was pointed out that in the south-eastern states, as well as in the tropics, certain plants retain two or three quarts of water and there is concentrated breeding in these. It was also noted that by spraying with a 1¼ percent DDT suspension, rather than an emulsion, there was no plant damage. In some islands under the *aegypti* program, cisterns and water drums have to be given special attention because they are a source of supply for drinking water.

Service calls are much the same in all parts of the country, and many times we in mosquito control are asked to make recommendations for household control. It was pointed out that the average citizen is looking for the magic bullet that can be sprayed, fogged or applied around the yard so that no mosquitoes will come in through the barrier. This is not available as yet! However, the mosquito control employee, if he does make a recommendation concerning an insecticide material, should be sure it is a standard and readily available material. The householder should be warned to read the label and follow the directions and that misuse could lead to possible hazard, safety being the first factor. Some mosquito control districts do make efforts to assist an inquiring householder on control of other insects and arthropods, because they are trying not only to be helpful, but they consider this an excellent gesture toward better public relations.

It was emphasized that if an agency does follow this policy, they should never give any specific instruction, because a householder may misunderstand the instructions or he may use them and, if there has been some damage caused, then, according to the lawyers, there may be reference to the "reliance upon superior knowledge" clause. Reference to specific publications can be made without getting into an entangling problem; such as, if this is an agricultural problem, then an agricultural extension service should be consulted.

Due to the fact that the population explosion has been moving the communities into more rural areas, insects and pests have become more of a problem than they have been in the past because the population is encroaching upon the lands of the wildlife. Some districts have established policies concerning these matters. Biological control was mentioned and, of course, the purple martin and the surface feeding minnows were discussed with the recommendation that further consideration of other biological controls be investigated.

Note was made of the fact that with the construction of new homes and buildings, there are mosquito breeding sites created. Mosquito control districts are finding more and more problems on projects related to roadways and expressways. Many times drainage courses are interrupted temporarily or even permanently due to poor coordination and cooperation between mosquito control districts and highway planning. We are also being faced with problems related to borrow pits as dirt is needed to construct these expressways, and cooperation is necessary to meet this type of

situation where mosquitoes might breed. These points emphasized the need for the exchange of mutual, useful information between governmental agencies. One of the last questions mentioned concerned what to do when an official or a representative of a mosquito control district is invited to speak outside of his area of responsibility and then asked what to do when there is no mosquito control district. The only answer is, "why don't you establish a district?," but perhaps this question will be discussed in one of the AMCA meetings of the near future.

NOTE

Several "Proceedings Papers" were received too late for inclusion in this, the June ("Atlanta number") of Mosquito News. Among them are those which were presented as a part of the Symposium on Resistance. It is planned to include them in the September number, where they will comprise Part II of the Proceedings.

CORRECTION

The date on the spine of Vol. 26, No. 1, (March, 1966) was incorrectly printed as March, 1965. We suggest that the 5 be changed to 6. This change can easily be made with a black ball-point pen.