

INTER-RELATIONS OF AMCA, STATE AND REGIONAL ASSOCIATIONS AND LOCAL AGENCIES

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In order to fully understand the purposes and motivations of the organizations involved in mosquito control and in promoting exchange of information, good will, and cooperation, one should go back to the reasons for organized mosquito control and an assessment of prime factors involved. The time available to me will not permit that this involved subject be presented in great detail, so I'll simply point up some major factors.

Every level of government, local, state, and federal, has a major responsibility to its citizens to take appropriate steps to insure that its people will have a healthy and comfortable environment in which to live and work. This responsibility is car-

ried in various ways and with varying degrees of success and expertise, ranging from very good in some communities to, unfortunately, very poor in some others. However, there was early realization in regions where mosquitoes were prevalent that few if any other factors in the environment could be more obnoxious and damaging to human health and comfort than intolerable gluts of mosquitoes. During the past 3/4 century very effective mosquito suppression programs have evolved, contributed to by local, state and federal governments and by industry and research organizations. Now many of the areas which formerly were most infested and most impeded by uncontrolled mosquito infestations have been protected to

an extraordinary degree, so that in most cases the people are unaware that there is a continuing severe problem, suppressed only by an intensive, scientific control programs and that the mosquitoes could come back in all their awesome pristine hordes if the control program were suspended for even a couple of months!

At first there were false starts and failures of some would-be-control programs, usually because the behavior and habits of the mosquitoes were not sufficiently understood, the included areas were too small, or the suppression program was insufficiently supported—"too little or too late" proved to be a certain formula for failure!

Observant scientists soon focused in on the deficiencies and quickly learned from the early abortive attempts what was necessary for success, and gradually developed a formula that assures success by joint participation of various levels of government and other organizations. There are many variations, but in a broad general way, allowing for appropriate overlap where local situations so indicate, this formula provides generally as follows:

1. The local district, commission, department of whatever it may be called is the dynamic attack agency that has immediate responsibility to protect the people within its boundaries from mosquitoes. The local people receive the primary benefits, and logically should and do carry the principal costs through taxes. It is essential that this agency have access to all lands on which mosquito sources occur and power to take corrective action as necessary. This was recognized as early as 1902, and is reflected in the model legislation that has evolved over the years. Two good examples are the laws that have been in effect in New Jersey since 1912 and in California since 1915 (See powers of a mosquito abatement district). In practice, the effective local mosquito control agency selects and in each instance assiduously applies the most applicable control measures from the entire

armament of mosquito control measures which are check-listed in Table 1.

It should be recognized that most of the work is done on privately owned lands, not for the benefit of the landholder but for the public. The agency must consider the landholder's interests and desires, and tailor the control measures to be compatible with his land use. There is also an exceedingly strong desire among mosquito control agencies to cooperate with other public and private agencies to insure that mosquito control operations are compatible with other activities that are in the public interest. These factors complicate and make more difficult the mosquito control functions, and stand in the way of simplistic programs. The local agencies are and will continue to be the "first line troops," and should be respected and supported as such. Their tools are primarily the tested and proved technology and methodology, selected and utilized in a manner that results in an effective and economical total program.

2. The role of the State is distinctly different. Its legislature must provide a legal basis upon which an effective program can be developed, and which will prevent undue interference with the local programs by unthinking or irresponsible or self-interest-oriented persons or organizations. At the same time, the legislation must protect the interests of the landholder, and if his property is damaged, he must be compensated. Since lawsuits or other legal actions have been few and far between during the 75 years of active local mosquito control, it is evident that the enabling legislation is very good.

The State has other logical functions: support of university and other research and development, surveillance, particularly of potential mosquito borne diseases, coordination of active programs, and in epidemics, emergency control in areas that do not have adequate local programs. It is only good business for the State to engage in such programs, first because the prevention of undue annoyance and mosquito borne disease allows normal

economic development to occur, thereby increasing productivity of the land and of the people with resultant improvement of the tax base; and second, because the cost of caring for people who suffer perma-

nent impairment due to mosquito borne diseases is enormous: it was estimated that each unfortunate permanently damaged victim of the 1952 encephalitis epidemic in California would cost the

Table 1 Elements of comprehensive mosquito control performed by mosquito control agencies.

Inclusive of all known control methodology as applicable	A. Natural Population Limitation			Abets natural limitation through selective use of biological and physical factors similar to those found in the natural environment
	Biological factors:			
	Predators Parasites	Pathogens Detrimental plants	Food productivity Competitors	
	Abiotic factors: (physico-chemical factors of the environment affecting mosquitoes, their enemies, or habitat)			
	Rainfall and runoff Percolation Humidity Evaporation	Temperature Salinity Alkalinity Acidity	Sunlight and shade Turbulence, currents, waves Nature of soils substrate	
	B. Biologically Oriented Control			
	Manipulation of living organisms to destroy or limit mosquitoes at all stages Environmental practices aiding populations of mosquito enemies or increasing their effectiveness Genetic manipulation			
	C. Physical Control (Source Reduction)—Elimination or Modification of Breeding Places			
	Water Management Drainage Impoundment Contour design Reuse Organic solids removal	Regulation Circulation Flow and exchange rates Levels and depth		
	Land preparation and management Filling Grading Drainage Crop selection and management Weed control			
D. Chemical Control			TEMPORARY CONTROL	
Ovicides (not usually practicable) Larvicides (small areas treated to protect large affected areas) Pupicides (infrequently applied) Adulticides (particularly useful in emergencies and in areas of chemical resistance by larvae) Repellents Growth regulators, physiological inhibitors Attractants (with other procedures) Weed Control				
F. Mechanical Barriers				
Screening of buildings Temporary barriers as bed nets and mosquito-proof clothing				
F. Landholder Motivation to Cooperate				
Public information and education Individual persuasion and cooperative efforts Legal action and enforcement Interagency cooperation				

state 1/4 million dollars for care during his residual lifetime! The state should also provide technical consultation to local agencies, help in obtaining the cooperation of state and federal regulatory agencies, and the cooperation of other state agencies that have land and water management responsibilities. The state should be a strong buffer between local programs and any other group that attempts to hamper the successful progress of local control programs.

3. The federal government also has enormous responsibilities in this field. First and foremost is the responsibility to help protect the health of the people. We are all heavily taxed for this health and welfare program and it is essential that the responsibility be effectively discharged. There are many aspects to this: evaluation of problems, assistance to state and local communities in establishing effective programs, guidance and aid to industry in the production of the products necessary for public health purposes, support for research and development at all levels, emergency control of epidemics involving more than one state, promotion of cooperation between federal and state or local agencies in lieu of obstructive regulations, survey and training assistance, and assistance in the development of standards and recommendations, and in providing information to the public.

One aspect of interrelationships has been brought sharply into focus by questions that have been raised where local programs have been forced to squander energy and local resources in a manner that is wasteful of local funds in order to satisfy the demands of federal regulatory agencies: the local representatives want to know if it was the intent of Congress in providing almost unlimited powers to federal regulatory agencies that the administrators should override specific powers exercised by the several states in accordance with states rights as spelled out in the U.S. Constitution. This is a fundamental question that needs to be answered. Should these federal agencies deal with accredited and qualified state

and local agencies by edict and dictation and the onerous permit device, or should they function by cooperation and practical assistance? Which way will provide the greatest values to the people, who in either case ultimately must pay the bill through taxes?

Against the background of the complex relationships which exist among the local, state, and federal agencies that have responsibilities impinging upon vector control, we must also consider the proper role of the local associations and the AMCA. In each instance a primary purpose is that of promoting the purposeful exchange of information and ideas, through conferences and/or publications. Let us reexamine with pride the statement of purpose which since its founding in 1935 has been an idealistic guidepost for AMCA:

"An association of mosquito workers, entomologists, medical personnel, and engineers, public health officials, military officers and personnel and laymen who are charged with, or interested in mosquito control and related work.

"A non-profit, technical, scientific, and educational association, the purpose of which is to promote closer cooperation among those directly or indirectly concerned with, or interested in mosquito control and related work, to work for the highest standards of efficiency in such work; to encourage further research; to disseminate information about mosquitoes and their control; to work for understanding recognition and cooperation from public officials and from the public; to encourage the enactment of legislation providing for a sound, well balanced program of mosquito control work suited to local conditions wherever needed; to meet fairly and understandingly, and thus disarm opposition to mosquito control work from any source; to protect wildlife in every possible way from avoidable harm, and to encourage the use of control measures calculated to bring the best practicable degree of adjustment where diverse interests are involved; to work for the highest degree of

understanding cooperation with related organizations, to the end that the best interests of all may be most fully served; and to publish MOSQUITO NEWS as a journal of mosquito control work, in the furtherance of these objectives."

The state, local, and regional associations are motivated by equally idealistic and altruistic intent. You might then ask "why should there be many associations instead of just one combined organization." I may offer my views on this for what they may be worth, (and please note that I maintain active membership in a considerable number of the associations within the country—wherever I am eligible for membership, because I believe fully in the local associations and in AMCA). First is a very practical reason: many of the mosquito workers simply are not free to travel to any part of USA to participate in the programs of AMCA, but by meeting locally they can exchange information with other workers having similar problems. In this connection we have not yet found a fully satisfactory channel by which the valuable information developed at these local meetings can be fully represented within the councils of AMCA, nor have we an effective channel by which developments within AMCA are adequately presented to the local associations. Perhaps we should give consideration to a proposal by which each local association would name one or two "official delegates" to attend each AMCA meeting, to summarize the information which develops in the local meetings, and to bring back home the significant information from the AMCA meetings and programs.

This year brought an extraordinary example of the splendid cooperation that is possible between AMCA and the local/regional associations. When AMCA, because of fiscal constraints, could not fund a desirable publication which will be valuable to mosquito workers throughout the USA and elsewhere, the local/regional associations voluntarily stepped into the breach by pledging funds as "seed money" to allow the preparation of the

publication to go forward, with the understanding that AMCA will strive to obtain a grant for this purpose and if successful, the pledges will not be collected. May I publicly express the grateful appreciation of AMCA and of the authors of the publication for this extraordinary example of joint functioning.

In addition to promoting the exchange of information, there are many other ways in which the associations can be mutually strengthened by working together. By receiving and interpreting input from local sources, it may be possible for AMCA to develop an adequate statement that will promote the voluntary adoption of uniformly high standards of mosquito control functions by local agencies.

By obtaining active collaboration of local agencies and associations, AMCA may be able to develop a plan for excellent coordinated training in practical mosquito control, portions of which might be offered in connection with but separate from the annual meetings, by annual traveling seminars involving both classroom instruction and field training, and by exchange of personnel among functional agencies. To make such a program "go," a great deal of support and assistance from the local associations would be necessary.

By meeting jointly and sharing the responsibilities and the income from joint meetings, the size and values of the meetings have been increased enormously, and mutual benefits have been realized. This procedure is well established, and should go forward.

With so many varying field programs adjusted to the diversified conditions existing in widely separated parts of the USA, it is difficult to obtain a consensus of the views of qualified mosquito control specialists. However, AMCA has the capability of surveying the responsible personnel, with help from the local associations, and then after interpretation, presenting one voice for mosquito control to the appropriate representatives of government. Such a procedure is now under

way with respect to overly restrictive and damaging regulation by government agencies. When a reasonable proposal for modification is arrived at, it will be quite appropriate for AMCA to inform the Congress and the Federal agencies, and to ask for appropriate relief, based upon facts, not emotions.

There are highly important changes taking place that affect the policy makers who as commissioners or trustees provide the guiding policies for local programs. Through collaboration of the local associations, AMCA can importantly strengthen the portions of the joint meetings which treat these problems, and thereby better serve the needs of the policy boards.

Last but not least, by joint functioning coordinated by AMCA, the association can help communities in this country and overseas recruit highly trained specialists to provide specific services; and can serve as the center for collecting and distributing information on all phases of mosquito control.

A start has been made on a number of these functions—it remains only for all of us who are active in the various associations to individually and collectively provide input of ideas, recommendations, and support for joint programs of mutual benefit. By functioning together, the voice of mosquito control can be heard and respected.