

## HOW EFFECTIVE IS THE ULV APPROACH FOR *Aedes aegypti* AND DENGUE CONTROL?<sup>1</sup>

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The accompanying letter addressed to the SOVE Newsletter Editor from Duane J. Gubler, Director of the Division of Vector-borne Infectious Diseases, Communicable Disease Center, speaks of the questionable efficacy of ULV for *Aedes aegypti* control and to apparent inconsistencies in the historical record of the results obtained from the use of this ULV approach in the Americas and elsewhere.

"Dear Russ:

"I read with interest the article by Dr Robert Tonn in the last issue of the SOVE Newsletter about resurgence of vector-borne diseases in the Americas, and more specifically about the efficacy of ULV for the control of *Aedes aegypti*. He stated, "The pity of the story is that Dr Gubler's concern was not voiced at the time" (in the 1970s). I would like to set the record straight! Having observed the lack of impact of ULV applied from ground equipment on dengue transmission during epidemics in the South Pacific and Indonesia, I voiced concerns about the efficacy of ULV in stopping epidemic transmission as early as 1977. Moreover, Dr William Horsfall expressed similar concerns as early as 1975 in regard to controlling the mosquito vectors of SLE during the epidemic that year. The problem was that no one wanted to listen!

"When I joined CDC in 1980 and was preparing to move to Puerto Rico, I proposed that we stop the perifocal ULV spraying for *A. aegypti* control that CDC recommended at that time and really try to evaluate the ULV method. I was "over-ruled" and the programme continued. Not giving up easily, I decided to do my own evaluations. Together with Dr Bob Novak and Dr Carl Mitchell, the first of a long series of evaluations was conducted in 1983. Unfortunately, the results from that trial were not conclusive. In 1985, I hired Dr Paul Reiter specifically to design and conduct trials to evaluate the ULV method for controlling adult *A. aegypti*. Paul's work has been exceptional and the results are now history. The most important factor in this series of trials was the methods used to monitor the wild adult mosquito population.

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<sup>1</sup>Abstract from Vector ecology Newsletter, Vol.22, October 1991. (Society for Vector Ecology).

"My concern is and has always been that we as public health officials were ignoring a persistent trend of increased frequency of epidemic dengue activity and the geographical spread of dengue haemorrhagic fever while clinging to a control strategy that clearly was not working. For a variety of reasons, our pleas for over 13 years fell on deaf ears. I am happy to now learn that those responsible for prevention and control of A. aegypti-borne disease are acknowledging that there may be problems with the approach.

"As I have stated repeatedly, we should not throw out the baby with the bath water. Adulticides may have a role in our arsenal for combating epidemic disease, but they are not magic bullets. Probably the biggest problem with ULV has been the way it was sold to health officials as the ultimate method for controlling epidemic dengue. Everyone wanted to believe in this approach because it was quick, easy, and highly visible. Never mind that it did not work! This "quick fix" mentality gave both citizens of the community and government officials false sense of security (the ostrich syndrome). We as public health officials and entomologists bear the responsibility for that deception. I think it is time we tell health officials to pull their heads out of the sand and help us look critically at available control methods for A. aegypti. Only then will we be able to obtain the support we need to get on with developing more effective methods of prevention and control".