

Dengue: local solutions to a global health problem

In search of a sustainable, chemical-free way to dengue prevention

Dengue prevention

There are 100 million dengue cases and 400 million infections per year globally. Current control strategies depend on placing an organophosphate larvicide called *temephos* (brand name: Abate) in water storage containers where the main vector *Aedes aegypti* tends to breed. This has not curbed the spread of dengue across the globe and into the northern hemisphere.

Current strategies encourage community participation. The challenge is to show that such strategies actually reduce dengue infection and to build local capacities that assure they are sustainable.



Brigadista showing resident how to identify mosquito larvae in his water storage barrels

The intervention

- Evidence-based discussions with communities to obtain consent and recruit volunteers (*brigadistas*)
- Visits by *brigadistas* to households, schools and businesses to show presence of mosquito larvae in water receptacles
- Collective events to mobilize, educate and prevent breeding in common spaces
- Coordination with public services for concerted action.

The Camino Verde trial – a green way to prevent dengue

Since 2009, CIET and UC Berkeley have been conducting a cluster-randomized controlled trial in Nicaragua and Mexico to test the success of community mobilization for sustainable control of the *Aedes* mosquito without dependence on chemical products.

Sample: 75 intervention & 75 control communities across 2 countries.

Impact indicators: entomological evidence; serological evidence of recent dengue infection in children; reported dengue cases.



Dengue infection can be identified from samples of children's saliva



Draining puddles where mosquitoes lay their eggs



Participatory Research at McGill

CIET Building the community voice into planning

For more information:

<http://caminoverde.ciet.org>