

TRADITIONAL USE OF MOSQUITO REPELLENT PLANTS AND TESTING THEIR REPELLENCY IN FIELD TRIALS AROUND GILGELGIBE RESEARCH CENTRE, JIMMA ZONE, SOUTHWEST ETHIOPIA

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Background and Aims: Although local plants as mosquito repellents are known and used among the different cultures of Africa and beyond, little effort is done to document about the knowledge, usage pattern and their repellency potential in Ethiopia in general and specifically around Gilgelgibe Field Research Centre, Jimma Zone, Southwest Ethiopia. This study was aimed to assess the ethno botanical knowledge and usage custom of traditional mosquito repellent plants among the inhabitants of Gilgelgibe Field Research Centre, and evaluating the mean percentage repellency of candidate plants.

Methods: Community based cross-sectional quantitative study and pilot field repellency test using candidate five potted mosquito repellent plants was conducted from January 19 to April 10, 2010. The total sample consisted of 417 households for quantitative study. Data were collected using a pre-tested interviewer administered structured questionnaire and by vector collectors for field test. The quantitative data were cleaned, edited and entered into SPSS version 16.0 and analyzed. Repellency of plants to mosquitoes was evaluated by using mean percentage repellency.

Results: The study identified eleven species of mosquito repellent plants. Besides, 85.9% and 73.14% of the respondents had knowledge and usage practice of mosquito repellent plants, respectively. The mean percentage repellency of *Lantana camara*, *Cymbopogon citratus*, *Ocimum sanctum*, *Chrysanthemum cinerariaefolium* and *Tagetes minuta* to all mosquitoes were found to be 57.0%, 56.0%, 50.7%, 46.7% and 37.0%, respectively.

Conclusions: Mosquito repellent plants are widely known and used among the inhabitants of the study area. Field evaluation on the repellent activity of plants showed that repellent plants reduced natural population of mosquitoes significantly as compared to the control house, showing repellency on the range of 37-57%. This study, therefore, provides valuable information to all stakeholders who are involved in mosquito born disease control, particularly for malaria vector control.

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