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NATURAL GREEN BIOGENIC FOR MOSQUITO MANAGEMENT



Problem statement

Overall, 56.99% of the human populations in the world is exposed to vector-borne diseases such as malaria, dengue, Zika, Chikungunya and Yellow fever. Due to the insecticide resistance in mosquito populations, control effort using chemical approaches is no longer effective and might increase the potential of vector-borne diseases. In Malaysia, premises with breeding sites of Aedes mosquitoes will be fine up to RM500 by the Ministry of Health.

Novelty & Inventiveness

- The invention of the green biogenic formulation is a pesticide free bio-natural product derived from unwanted weed; designed as both larvicide and adulticide.
- The invention also prolongs its effectiveness up to 21 days by one application, and also reduces the number of eggs laid by the adults.

Applicability

- The invention is prepared as a liquid spray. Easy to apply by just spraying the solution straight to the mosquito breeding sites; one press of this liquid natural biogenic spray can cover up to 50cm of water

Product/Technology Readiness

- TRL 4
- Ready to use product and the effectiveness has been tested and proven via seven type of tests

Research Achievement

- Funding: FRGS (203/PBIOLOGI/6711629) & USM Short Term Grant (304/PBIOLOGI/6312026)
- Publications: 5 ISI papers
- Talent development: 1 Ph.D., 2 MSc., and 3 BSc.

Intellectual Property

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Commercialization Potential

- This product is targeted at people that live in vector-borne disease countries, especially in Southeast Asia, with 59.66% of the world population is at risk of vector-borne diseases.

Level of Impact

- This invention is the only product available that can act as both larvicide and adulticide.
- It is suitable for household use, which can be applied indoor and outdoor areas; in any containers that contain water such as flower pots, small water pools, and drain.

Presentation and Other Strength

- Pesticide-free product using green management technology; which is safe to the non-target organism and mammalian.
- Low cost of production and environmentally friendly



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