Population Monitoring of Aedes Mosquito in the Study Sites

Collection of Immatures

Collection of Adult Mosquito

PNRI has established and maintained a mosquito colony that will be used for mass-rearing and sterilization. Improvement of rearing methods for production of good quality competitive mosquito for sterile releases is very important for planned SIT Program.

Population dynamics and fertility of the Aedes mosquito is being done in the study sites to serve as baseline data prior to implementation of sterile male mosquito releases in the field.

For more information, please contact:

MS. GLENDA B. OBRA,
Head, Agriculture Research Section
and Scientist 1
Tel. No.: 929-60-10 loc 298 / 274

MR. SOTERO S. RESILVA
Senior Science Research Specialist
Tel. No.: 929-60-10 loc 298 / 290

COOPERATING AGENCY:
Department of Health
Old Balara, Quezon City

FUNDED BY:
National Research Council of the Philippines
International Atomic Energy Agency

Department of Science and Technology
PHILIPPINE NUCLEAR RESEARCH INSTITUTE

Commonwealth Avenue, Diliman, Quezon City
PNRI Trunkline: (632) 929-60-10 to 19

pnri.dost.gov.ph

facebook.com/PNRIDOST

DEVELOPMENT OF STERILE INSECT TECHNIQUE

Against Dengue Mosquito Vector

DEVELOPMENT OF STERILE INSECT TECHNIQUE

AGAINST DENGUE MOSQUITO VECTOR

More than 1 million people die each year resulting from mosquito bites, according to the World Health Organization. One of the most important viral diseases transmitted by mosquito is dengue which is endemic in the Philippines. The Dengue mosquito vector, *Aedes aegypti* also transmits chikungunya and zika virus.

PNRI researchers are developing the Sterile Insect Technique (SIT) against *Aedes aegypti*. SIT has the potential of controlling Aedes mosquito in complementary with other existing methods of control. The technique has several advantages as follows:

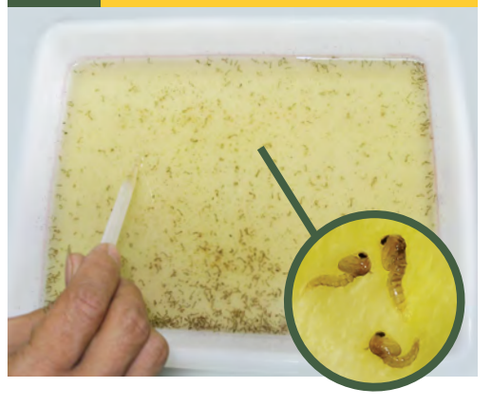
1. **Does not pollute the environment**
2. **Female Aedes mosquito mates only once under natural conditions**
3. **Controls only the target pest, sparing the natural mosquito predators**
4. **No development of resistance by target pest**
5. **Can control multiple vector-borne diseases**

1 Rearing of Adult Mosquito

2 Blood Feeding of Adult Mosquito

3 Scoring (Egg Counting)

4 Rearing of Immatures



5 Separation of Male and Female Pupae

6 Sterilization using Gamma Irradiator

SIT involves mass-rearing of the target pest, sterilization of males using ionizing radiation, and release of sterile males in the target area to mate with wild females. No offspring are produced in the process, resulting in a declining pest population.