



BOOK OF ABSTRACTS



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OC214. The Sterile Insect Technique and its derivatives against *Aedes* invasive species in Europe

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Mosquito-borne diseases represent a major threat to human kind. Dengue is a particular treat and WHO indicates the urgent need for alternative mosquito control methods, including the Sterile Insect Technique (SIT), which has progressed rapidly in recent years. The SIT package against mosquitoes is currently under development and huge progress was made in all components including mass-rearing of larvae and adults, sex-sorting of pupae, handling, transport, irradiation and aerial release of the sterile males. Testing is ongoing in the field following a phased conditional approach (PCA) proposed for the validation and potential large-scale deployment of the SIT against mosquitoes, as a component of an area-wide-integrated vector management strategy. In such a process, support or advancement to the next phase is conditional on the completion of all (or most) activities in the previous phase, and the scope, expense, and commitment increase along the process. In Europe, several countries initiated field trials against *Aedes albopictus*. Albania, Croatia, France (mainland), Montenegro, Portugal and are in phase 1 (baseline data collection) and implemented mark-release-recapture experiments using irradiated males. Croatia, Germany, Greece, and Serbia have conducted small-scale field trials (phase 2). Italy, Spain and Reunion island are currently upscaling these field trials (phase 3). Finally, Cyprus has initiated an eradication trial against *Ae. aegypti*. In our presentation, we will review the progress of these countries along the PCA, showing that SIT was able to suppress target mosquito populations in various settings and present the perspectives in Europe, including the potential of combination of SIT with other methods to improve the control of mosquito-borne diseases (boosted SIT in particular).

OC215. Sugarcane molasses as an alternative adult diet for laboratory rearing of *Aedes albopictus*

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High vectorial capacity of *Aedes albopictus* adds pressure on public health. To manage mosquito and diseases spread, a list of control methods and approaches have been developed and implemented. Among them the Sterile Insect Technique (SIT), a biologically sound approach, aiming to suppress wild mosquito populations, was tested and adopted. To support SIT applications, laboratory mosquito rearing is practiced, to guarantee mosquitoes' quality, survival and performance in the wild. Sugar solution constitutes the main adult diet despite issues encountered (e.g. mold). We explored sugarcane molasses as an alternative and low cost adult diet, in two laboratory trials and compared it with a sugar solution (10%). Longevity, blood feeding rate and fecundity was compared in laboratory adults emerged from three different larval diets (catfood, fishfood, mealworm flour). Eggs layed from wild adults were counted and the size of eggs and pupae was recorded. Our results revealed that laboratory-reared females fed on sugar solution lived longer regardless of the larval diet. Male lifespan didn't differ between adult diets, in two out of three larval diets. Blood feeding was affected by larval but not adult