



**Guidelines for the implementation of measures against
the development of mosquitoes on the island of Albarella**

Pursuant to **Order no. 10/2016 dated 10/5/2016 issued by the Municipal Authorities of Rosolina**, we hereby wish to raise the awareness of all property owners on the need to implement a shared plan to fight the growth of mosquito species existing in our territory, in particular the so-called Asian tiger mosquitoes, which select home gardens as their favourite habitat.


Awareness-raising of all community members is not simply useful, but it is definitely indispensable and should be put in place in collaboration with the pest control service on the island.

Based on the above, we would kindly like to encourage every property owner or garden user to put in place a number of measures to prevent the reproduction of the above-mentioned species, keeping in mind that the golden rule is: "avoid stagnating water".

We would also like to inform all owners concerned that they will find **bottles containing tablets of larvicide insecticides at the secretary office of Comunione**, which they will be asked to use following the instructions on the label.

The Security service is authorised to carry out random inspections to verify compliance with the rules to prevent mosquito reproduction. Where blatant or repeated non-compliance is identified, a report shall be submitted to the competent Municipal Authorities of Rosolina.

Please find below a list of guidelines and useful information to fight the growth of mosquitoes on the island of Albarella.



ASSOCIAZIONE COMUNIONE ISOLA DI ALBARELLA
L'Amministratore Albarella S.r.l.
Il Delegato
(rag. Giuseppe Iezzi)



General

Biological Cycle

Asian tiger mosquito females need to take several blood meals every 3 to 5 days; in optimised conditions they can live up to 30 days. They lay eggs above the water surface. Their fertility rate is approx. 300 to 350 eggs per female. The number of eggs laid after a blood meal depends on many factors, but it is normally around 40 to 80 eggs every gonotrophic cycle. After oviposition, the eggs may hatch after a short time or a few months if they are laid in winter. In this latter case, eggs enter a dormant state known as "winter diapause". The duration of a mosquito life cycle is closely affected by the availability of food and the temperature. At average water temperatures of approx. 27°C the interval between the egg stage and the adult stage is 7 to 8 days.

Habits and behaviour

Asian tiger mosquitoes are especially active during the day: their activity peak varies according to the ambient conditions, but they are generally more active in the late morning and afternoon. These mosquitoes predominantly belong to an exophile species: they dwell on vegetation (hedges, tall grass, bushes) and are attracted by dark colours.

Breeding Grounds

The common breeding ground for this species is standing water inside any type of container, including in small amounts. Asian tiger mosquitoes do not oviposit in puddles, ponds, rivers or canals (free water), swimming pools, large tanks, and flooded basements. They can colonise areas with small amounts of stagnating water, such as containers, bottles, folds in plastic tarpaulins, trap-doors, small cavities in rocks, plant pot saucers. The hardest challenge in fighting Asian tiger mosquitoes is the presence of a high number of small breeding grounds scattered around our territory, mostly in private properties. Any efficient mosquito fighting campaign necessarily requires that all property owners be informed and involved in order to minimise the onset of potential breeding grounds, which is even more effective than carrying out pest control initiatives at the public trap-doors.

Below is a list of some areas that are potential sites of mosquito proliferation, including some simple remedies.

PVC tarpaulins to cover roofs and swimming pools

Tarpaulins are often used to cover roofs, swimming pools and other objects. They are potential breeding grounds and reproduction sites of Asian tiger mosquitoes. Water may stagnate in the folds and stay there for long as it cannot evaporate. We recommend using lightweight tarpaulins, preventing the formation of slackened pockets, and stretching them properly to avoid folds.



Albarella Srl

The Managing Entity

Plant pot saucers

These are the best known form of breeding ground, although they are rarely the actual cause of development of Asian tiger mosquitoes. For this to happen saucers should be filled with water and never dry - at least for one week -, which is quite unlikely in summer. Although saucers are normally largely used, the number of those infested is very small. Special attention should be paid by purchasers or importers of bromeliads as larvae may be present in the water build-ups at the axil of the leaves. We recommend removing such flowers or waiting until they are fully dry before watering again.

Trap-doors and pits

Trap-doors and pits are the main reproduction sites both because of their capillary distribution and their ability to retain water, including at dry times when there are no precipitations. Another aspect making them extremely dangerous is their being poorly visible, in which case they are often neglected or underestimated. Please also remember that Asian tiger mosquitoes can fly through very small holes or openings, as well as being able to fly a few metres along underground pipes to settling ponds where they oviposit. Mosquitoes can also fly through gaps in the gutter sumps or cracks that may open due to rust - especially at the back of gutters, in areas which are difficult to see. Other elements worth monitoring are the storm drain grates outside garage entrances, which normally look dry because any collected water is transferred to a lift station. Mosquitoes can fly from the grate to the station along the pipe, including in cases where the distance is a few meters. We recommend that the owners thoroughly inspect their gardens to locate any possible breeding ground and that they inspect each sump fitted with a grate, cracks or holes in order to check for standing water. Drain manholes should be supplied with a strong net which needs to be cleaned (to prevent obstructions) and checked (to identify breakage) at regular intervals. The downpipes in the gutters should be sealed with silicone at the point(s) of entrance into the sumps, and any parts of the gutters damaged by rust should be replaced. Trap-doors should be treated with insecticides at regular intervals, as instructed and according to the timing specified on the product label. As regards grates at garage entrances, the settling pond should be located and treated with a larvicide product at the specified intervals. If the settling pond is underground and access to it cannot be gained, the larvicide product should be placed close to one of the ends of the water feed pipe and a bucket of water should be poured on the product so that the larvicide can be carried by the water flow. Cavities in trees and broken bamboo canes are the main reproduction sites of Asian tiger mosquitoes in their places of origin. These breeding grounds are found in our locations too, especially after persistent rainfalls, although there are not many of them and their impact is negligible with respect to the overall population.