FAQ

In2Care Trap – FAQ's from homeowners

Topic	Question	Answer
Efficacy	**Why do we see a lot of mosquitoes after a heavy rainfall?**	Aedes mosquitos can lay many eggs around a yard that can remain dormant for many months while waiting for water. Once the rains come, you can get a blooming effect in that many of the dormant eggs will hatch and lead to biting adults. In2Care Traps can control this population increase, however because of its delayed effect, it may take a couple of weeks to again reduce the population. A one-time chemical application may be needed as well as some customer education of the process
Efficacy	**Will a lot of rain reduce efficacy?**	Rain will not reduce efficacy. PPF is very potent and active at concentrations of only 10 ppb. The water in the trap will contain enough PPF to kill mosquitoes even when rain dilutes the content: results show it to still be effective at 2000-fold lower concentrations. It is very important to keep the gauze dry
Mosquitoes	**Will it work on other mosquitos?** **How come I still see mosquitoes?**	The In2Care® Mosquito Trap is designed and EPA labeled for the control of *Aedes aegypti and albopictus*, mosquito species (day biters) that are known vectors of the Dengue, Chikungunya and Zika virus and breeds typically in (man-made) containers. However, although not specifically labeled for other mosquito species that also use these types of breeding places, some *Culex* mosquitoes will also be attracted and impacted by the Trap. The dissemination/spreading effect of the larvicide, however, is specific for the *Aedes* mosquito. Besides the delayed effect of the In2Care trap, there may be mosquitos that fly into the In2Care control zone from other areas. This is especially true of Aedes mosquitoes, which can travel over 200 yards to find a blood meal and breeding place. If they enter the trap, they will die within 8-10 days and will also spread the growth regulator.
Placement	**I have dogs. Does it need to be anchored?**	If the unit will be placed in an unstable area or is susceptible to winds and other animals knocking it over, stability can be improved by fixating the Trap into the soil using ground pins (that can be added to the interface). See our video: https://youtu.be/BcUzoIiFLcI Weights adhered to the bottom of the trap may also be used if needed. However, a determined dog may get into the trap or knock it over so some efforts may be needed to keep this from happening.
Placement	**Can the product be used indoors?**	Our product is EPA approved for outdoor use only. Additionally, the Aedes mosquito will most likely not often seek for breeding sites indoors. Since there are less standing water sources available and the environment is often cooler due to air conditioning.
Safety	**Will Active Ingredients in In2Care® affect non-target insects, pets or people?**	The active ingredients in our Trap are not toxic to birds or mammals. We make use of a biological fungus that is only toxic to insects. This larvicide is approved by WHO to be used on drinking water and specifically targets mosquito larvae. In the low concentrations used, this product is practically not toxic. Further,

	What about fish such as in Coy ponds?	the container itself is attractive to mosquitos not beneficial insects. If exposure is suspected consult the SDS and call 0015127712893 The growth regulator portion of the active ingredients can be toxic to fish in high doses. However, it is almost impossible to have mosquitos transfer enough product to a typical pond to harm fish such as coy. The only way such an exposure could happen is if the contents the entire bucket were to be emptied in the pond. Even then, the harm to fish is remote.
Safety	**Will it get into ponds/lakes?**	If by any chance, water or runoff from the In2Care® Mosquito Trap were to end in a pond or lake, the active ingredients will not cause any effect on the local wildlife or flora.
Safety	**Is there any effect on toads or frogs that might jump into the trap?**	There is no effect on frogs or toads that jump into the trap, as the actives are not toxic against them. We have experienced before that frogs that jumped into the trap wetted the gauze on the floater while trying to jump out (and thereby bumping t against the floater). There is no easy solution to prevent frogs from entering the traps unfortunately. We have designed the opening between the trap lid and container such that we get optimal mosquito entry. If we make this space smaller or add material that can block frogs etc, we will also limit how many mosquitoes will get attracted and enter the trap. In case there is a problem with frogs getting in, perhaps you can try placing the traps in locations with fewer frogs present? For example, in more elevated places to try avoid animals entering the traps.
Sales	**Where can I buy the Trap online (USA)**	The In2Care Mosquito Trap is not available online, as professional servicing is needed. You will be contacted by our distributor in the United States (Univar), to connect you with the right experts in pest control in your area, that can offer you this service.
Trap	**Is the In2Care Mosquito Trap trapping Mosquitoes?**	No, this product does not trap mosquitoes. It acts as a dissemination unit. Mosquitoes will lay their eggs inside the water-filled units when sitting on the powdered gauze. They will be contaminated by the larvicide and fungus powder. They will fly out of the Trap and spread the larvicide that sticks to their body to surrounding breeding sites when laying more eggs. The fungus will kill the mosquitoes after a few days.
Whole system	**How long will the Trap last?** **What about sprinklers?**	It is recommended to replenish the water in the Trap together with the new refill every 4 weeks. The Trap is designed so that rainwater automatically fills it in the period between refills. However, during dry periods or dry areas, it might be necessary to add water every 2-3 weeks. This can be done without removing the lid, by gently pouring water on top of the lid. Generally, sprinklers are not an issue as it aids in keeping the In2Care trap at the recommended water level. However, sprinklers pointed directly at the trap (almost horizontal spray) may get the netting inside the trap wet, which will reduce efficacy. Vertical rainfall/sprinkler water entry into the trap is not an issue.
Whole System	**How long will it take to work?**	In2Care® Mosquito Trap will take approximately 2-3 weeks for results to be seen, as the next generation of mosquitoes are affected.

Whole system	**Is it organic?**	1. Mosquito adulticide - **Yes**, the Fungus spores are an organic adulticide. 2. Mosquito larvicide (Pyriproxyfen (PPF)) - **No** PPF is not an organic larvicide. It is an EPA-registered juvenile hormone analogue; a chemical that mimics a specific natural hormone involved in the growth and transformation from larvae into adult mosquitoes. In this product PPF is used in very small amounts (0.35 gram every 4 weeks). it requires less than 10/ppb to affect the water source making it a very "low impact" chemical. Due to the exploitation of the Mosquitoes skip-oviposition behaviour, where the PPF will effectively be spread only to target area's (other cryptic breeding sites) via the mosquito, no chemicals are unnecessarily spread in the environment. This makes it harmless to bees and other beneficial insects.
Whole system	**is there any data on what is the largest body of water that an infected mosquito can effectively contaminate to have the pyriproxyfen be effective?**	Aedes typically prefers small artificial containers for breeding. They do not breed in ponds or pools of water. From experiments in the lab we know that a single mosquito can effectively contaminate water bodies of 5 Liters (1.3 gallon). Pyriproxyfen dissolves in the water and is effective in concentrations of just 10 parts per billion. In the field, there will also be accumulation of pyriproxyfen from multiple contaminated mosquitoes over time. Aedes prefer breeding sites where mosquito larvae are present (that emit a specific smell) so you will have several mosquitoes visiting the same breeding source and spreading pyriproxyfen. From field studies in the Caribbean we learned that even large rain barrels could be effectively treated, probably due to this accumulation effect from multiple mosquito visits.

In2Care Mosquito Traps – FAQ's from Pest Management Professionals

Topic	Question	Answer
Mosquitoes	**Will it work on other mosquitoes?**	The In2Care Trap is designed and EPA labeled for the control of the day-biting and container-breeding *Aedes aegypti and albopictus* that are vectors of Dengue, Chikungunya and Zika virus. See: https://youtu.be/jC90BBiF4OM However, some *Culex* mosquitoes like *quinquefasciatus* will also be attracted and impacted by the Trap. The dissemination effect is specific for the *Aedes* mosquito that has the behaviour to lay its eggs in multiple spots.
	Will mosquitoes be trapped?	No, this product does not trap mosquitoes. It acts as a dissemination station. Mosquitoes will lay their eggs inside the Trap and will be contaminated by larvicide and fungus when sitting on the powdered gauze. They will fly out of the Trap and spread the larvicide that sticks to their body to surrounding breeding sites when laying more eggs. See: https://youtu.be/qmDFdVaJg0U. The fungus will kill the mosquitoes after a few days.

Application	**How many In2Care Traps are needed per house?**	We recommend placing approx. 10 In2Care Traps per acre at shaded vegetated sites where mosquitoes are likely to breed. Open sunlit surface areas can be excluded from the calculation. A typical yard generally requires 2-3 Traps. For large (>5-acre) client sites, a lower Trap density can be applied since you will get a mass-effect in larger areas.
	Do I need to keep fogging / spraying?	Since *Aedes* mosquitoes have a flight range of several hundred yards, we recommend to place Traps and add **an initial barrier treatment** (with bifenthrin or another pyrethroid) to protect small residential client sites from mosquitoes that come in from neighbouring yards, and to kill other nuisance mosquito species. Only at high risk locations we advise to repeat the barrier treatment a few times during the season, but it will not be needed to keep spraying as often as before. No spraying should be necessary in large (> 5-acre) fully treated areas.
	Is long-term / year-round treatment best?	Yes, this product is highly suitable for continuous year-round control and can be used to prevent build-up of *Aedes* mosquito populations. *Aedes* prefer to breed in the same breeding sites and only a few transported PPF particles will kill already 100% of larvae, so we can ensure effective larval control in the Trap vicinity also when there are only a few adult mosquitoes remaining. In areas with a well-defined mosquito season, it is logical to remove and store Traps in the cold non-active months, but we advise to place them at least 1 month before the mosquito season starts again to prevent *Aedes* populations building up.
Efficacy	**How long will it take to work?**	In2Care® Mosquito Trap will take approximately 2 weeks for results to be seen, because the larvicide needs to get spread first. The main impact is a reduction in the next generation of mosquitoes.
	I see living larvae in the Trap container – is it not working?	Seeing a lot of live larvae inside the Trap means it is working well. The larvicide in the Trap water kills mosquito larvae only at the time they pupate (transform from pupa into adult). This results in dead pupae and prevents any biting adults to emerge. The dead pupae will get eaten by the larvae and you will often not be able to see them. The larvicide does not kill the young larvae, which has the benefit that they will release attractive odours and lure even more egg-laying mosquitoes to the Trap.
	I still see flying mosquitoes - is it not working?	• If this is shortly after application, please note that the In2Care Trap has a delayed effect as mosquitoes will die within 8-10 days and will also spread the growth regulator and prevent development of new mosquitoes. The fungus infection, however, also reduces the mosquito's capacity to feed so you may still see flying mosquitoes but there will be much less biting. • If only small areas are treated, there may be mosquitoes coming in from surrounding untreated sites. *Aedes* mosquitoes can travel over 200 yards and do not keep to boundaries, which is why we advise to add an initial barrier spray treatment • It could be salt marsh mosquitoes or other nuisance species that are swamp breeders and not likely to visit In2Care pots. A barrier spray treatment should minimize the problem. • Another reason can be a mosquito bloom after heavy rains. *Aedes* eggs can remain dormant for many months and will develop after rain in newly-formed clean water puddles. In2Care Traps can control this population increase, however because of its delayed effect it may take 1-2 weeks to again reduce the biting adults. A one-time chemical application may be needed as well as some customer education of the process.

	What is the largest body of water that a mosquito can contaminate with pyriproxyfen?	*Aedes* typically prefers small artificial containers for breeding. They do not breed in ponds or pools of water. Pyriproxyfen is already active at doses of a few parts per billion. From experiments in the lab we know that a single mosquito can effectively contaminate water bodies of 5 Liters (1.3 gallon) and kill all developing larvae. In the field, there will also be accumulation of pyriproxyfen from multiple contaminated mosquitoes over time. *Aedes* prefer to lay eggs in breeding sites where larvae are present, so you will have several mosquitoes visiting the same breeding source and accumulate a good dose of pyriproxyfen. From field studies in the Caribbean we learned that even large rain barrels of 10 gallon could be effectively treated due to this accumulation effect from multiple mosquito visits.
	How long will the yeast tablets attract mosquitoes?	The yeast will dissolve quickly in the water and excrete an attractive organic smell for egg-laying *Aedes* mosquitoes for at least 2 weeks. The yeast functions to kickstart Trap attraction to mosquitoes. The larvae that will develop from eggs laid inside the Trap will feed on the yeast and there is usually no yeast visible in the Trap water anymore after 2 weeks. The smell of living larvae will take over at that time and provide the best possible lure for egg-laying *Aedes* mosquitoes.
	Will a lot of rain dilute the Trap content and reduce efficacy?	Rain will not reduce the In2Care Trap efficacy. PPF is very potent and active at concentrations of only 10 ppb. The water in the trap will contain enough PPF to kill mosquitoes even when rain dilutes the content: results show it to still be effective even at 2000-fold lower concentrations. We also recommend placing the traps in shaded, vegetated areas, where mosquitoes like to breed and no heavy rain input is expected.
Placement	**Do we need to adhere to 1 Trap every 400 feet?**	No – try to make sure the Traps are spaced out per label/manual requirements but place relatively more Traps in areas where mosquito breeding is observed or can be expected. These are shaded, vegetated, moist sites close to human activity and water.
	Can we relocate the In2Care Trap when it is assembled?	We recommend to not move the Trap after it is filled with water and activated with the floater with the powdered gauze. See: https://youtu.be/6wq6P0zM4_I.The gauze on the floater needs to stay dry. If the gauze becomes wet, the powder (bioactives) dissolve and will not contaminate the mosquito. The Trap can be relocated after the floater is removed, for instance during servicing.
	When opening the refill, the gauze strip looks patchy (not completely white) – is that a problem?	No - some gauze parts may be whiter than others, that is no problem. Note that it is critical to **shake the refill before use**. A well-shaken refill will result in a gauze fully covered with white powder: https://youtu.be/Lhells69aUM. If there are large black spots, put the gauze back in the sachet and shake vigorously again. If refills have been exposed to too high temperatures (>110° F) the powder can clump and the gauze will have much less powder. In this case, the gauze needs to be replaced with a new one.
	How should we handle the floater?	The floater carries the powdered gauze so that it is always close to the water surface. This is needed for optimal mosquito contact since *Aedes* like to sit close to the water surface when depositing eggs. The **gauze needs to remain dry** for the powders to work best. When handling and setting the In2Care Trap it is important to remember to have the water-filled bucket in place in the desired location first, then **gently place the floater** (using both hands) on the water. Dropping the floater into the water or 'sloshing' the water after the floater is placed in the Trap may cause the gauze to get wet. When Traps need to be relocated, first take out the floater and put it back in only after the Trap is in place again.

	Is it a problem if a Trap is placed in a partially sun-lit spot?	Yes - In2Care Traps should **not be placed in an area that gets <u>any</u> sun** during the day. This is especially true in mid-summer where temperatures are higher. Heat from direct sun exposure will not only reduce the attractiveness of the trap to the mosquito, it may also negatively affect the active ingredients. *Aedes* mosquitoes also tend to breed in fully shaded sites only. We recommend checking each Trap location at different timepoints during the day.
	How to handle and store the sachets when going into the field?	It is critical that the In2Care refill sachets are kept at a moderate to cool temperature by keeping them **out of the sunlight AND stored in an insulated container** (such as an Igloo® type container with an ice pack or cooling block) especially when in the hot cab of the service vehicle. Sachets should not be transported on clipboards where they will be exposed to the sun. When refills are exposed to too much heat (>110° F) the powders will melt and form "caked powder" plaquettes, which greatly reduces the effective pick up and transfer by the mosquito and limits In2Care Trap efficacy. See video: https://www.youtube.com/watch?v=Lhells69aUM
	How can I avoid animals from knocking over the Traps	We advise to place In2Care Traps on level surfaces in secluded spots where domestic animals cannot reach. **Securing tools** are available for firm placement and avoiding Traps from getting knocked over: https://youtu.be/2OjRthXcdxA. A long ground pin or stake will usually do the trick. Another option is to use the concrete blocks produced by VM products.
Servicing	**During servicing, do we need to replace all the water from the Trap?**	Yes, the old water needs to be disposed. *Aedes* mosquitos like fairly clean water so saving some or all of the old water will reduce the effectiveness. See Trap servicing steps: https://youtu.be/zjGZHachrf8 By disposing of the old water, it will also eliminate other contaminants such as grass, leaves, etc. that could possibly clog the overflow holes should a very heavy rain occur
	Is the product still effective when the powdered gauze has gotten wet on 1 side?	If only some parts (less than 1/3rd) of the gauze get wet and have the powder removed, the product will still work well. Our results demonstrate that egg-laying *Aedes* often walk on both sides of the gauze before settling to lay eggs – so they will likely still pick up powder from the dry parts. If most of the gauze has gotten wet and powder is removed, it is necessary to replace it with a fresh gauze strip from a new refill sachet. In such cases, only the PPF dissemination may have been limited - the egg dump capacity will not have been affected as all developing mosquitoes inside the Trap will still die from the powder added to the water.
	When removing and storing Traps during the off-season, should they be washed?	No, we advise <u>not</u> to wash the containers with soap or disinfectant as this might repel Aedes mosquitoes. We recommend to just empty the Traps and let them dry before storing. If Traps are very dirty (with debris/leaves) they can be cleaned with a cloth to remove the dirt. Do not use an abrasive sponge on the inside of the pot, as the inner surface should remain smooth. A smooth surface prevents mosquitoes from landing/sitting there and ensures she will sit on the coarse gauze instead where she will be contaminated with the larvicide and fungus.
	Can we store In2Care refill sachets at room temperature?	When storing the sachets in the office, it is advisable to use a refrigerator to maximize the life span of the fungus and to avoid caking of pyriproxyfen when it is really hot. However, sachets can also be stored in an air-conditioned office (preferably at < 80°F) for several months with no decrease in efficacy.
Safety	**Will the In2Care Trap Active Ingredients affect**	The active ingredients in our Trap are not toxic to birds, mammals or humans. We make use of a biological fungus that is only toxic to insects. The

	non-target insects, pets or people?	fungus spores attach firmly to the insect skin within a few hours and will not get spread in the environment. Studies show that this fungus is even more safe to humans than common baker's yeast. It needs cues from the insect skin to grow and cannot grow at human body temperatures. The larvicide specifically targets mosquito larvae and is approved by WHO to be used on drinking water. In this product we use very low concentrations that are practically not toxic. The In2Care Trap is attractive to container-breeding mosquitoes and not beneficial insects like bees. No chemicals are unnecessarily spread in the environment. Tiny amounts of larvicide are disseminated and these will only end up in artificial containers (that *Aedes* prefers to breed in) where there will be very few non-targets. Because PPF gets broken down rapidly (6 - 9 days), it quickly becomes inactive in sites where there is no continued accumulation by mosquitoes.
	Is the product organic?	3. Mosquito adulticide: **Yes**, the Fungus spores are a biological entomopathogen - killing only insects. 4. Mosquito larvicide (Pyriproxyfen (PPF)): **No,** PPF is not organic but an EPA-registered and WHO-approved juvenile hormone analogue; a chemical that blocks the mosquito's growth hormone and prevents transformation from larvae into adult mosquitoes.