

# BIO-X UNDERSTANDS WHAT IS A SAFE, HYGIENIC AND A HEALTHY ENVIRONMENT

Bio-X is the only product available in the market that is multi-function, water-based, non-poisonous and “green” solution against insects, fungus, germs, bad odor and is ovicidal and larvicidal. It is also an insect repellent and plant-growth enhancer.

Bio-X solution is a combination of bio-degradable insecticide chemical called Etofenprox with herbal & organic extracts that give Bio-X it’s multi-functional and “green” properties.

## Why do we need a Multi-functional Product?



*It is a necessity!* ... harmful elements such as pests, germs, fungus/mold and foul smells are interlinked to form an unhealthy and complex web. Eliminating one usually does not remove the other. Hence, a hygienic and healthy surrounding requires an effective multi-functional solution to remove *all* harmful elements.

## Cost, Cause & Effect

To maintain a hygienic & healthy home (including house pets and their shelters), a typical homeowner will normally purchase and apply commercially available insecticide, disinfectant and/or deodorizer. As there are no consumer fungicide products available in the market, fungus issues are generally ignored even though it might affect the residents’ nose, throat and lungs.

Even if consumer fungicide is available and combined with all the single function solution mentioned above and applied simultaneously, when compare to Bio-X’s application, not only are these applications more costly but are also less effective. To make matters worse, these multiple applications actually add more harmful chemicals into the environment making it less healthy for all of us ... contradicting the homeowner objective of creating a safe, hygienic and healthy environment. This is simply because those consumer products generally contained harmful chemicals and solvents.

Insecticide aside (since most consumers are aware of their harmful effects), most commercial deodorizers consist of artificial fragrance and alcohol. They only mask the bad odor (meaning the bad odor is still present) making the affected surrounding more unhygienic. In other words, in addition to the foul smell, alcohol and artificial fragrance are added into the atmosphere ... polluting the environment.

### **Idiosyncrasy: Non-Poisonous Pesticide**

Pesticide by definition, under World Health Organization, states that: *“By their nature, pesticides are potentially toxic to other organisms, including humans, and needs to be used and disposed of properly”*.

Introducing Etofenprox (ETF); developed and manufactured by Mitsui Chemicals Agro, Inc. Japan since 1980s and has been widely used in Japan as insecticide for the rice cultivation.

Following is a Statement-of-Record on ETF taken from the “US EPA’s Etofenprox: Revised HED Risk Assessment for Conditional Registered Residential Uses”, dated April 6, 2006.

*“Etofenprox is a synthetic pyrethroid-like substance ... its toxicity and its chemical structure are somewhat different from that of a pyrethroid ...”*

Examples of pyrethroids are Cypermethrin, Deltamethrin, Permethrin, Tetramethrin, etc.

The statement above basically states that ETF is hundreds of times less toxic to mammals and birds than pyrethroids.

Under World Health Organization Classification of Pesticides by Hazard:

Class Ia/Table 1	Extremely Hazardous
Class Ib/Table 2	Highly Hazardous
Class II/Table 3	Moderately Hazardous
Class III/Table 4	Slightly Hazardous
Table 5	Technical Grade Pesticides Unlikely to Present Acute Hazard in Normal Use

ETF is under Table 5.

Under Toxicology, all chemicals are toxic (**including the most commonly consumed daily drink such as water, tea & coffee**) and it is measured by using a mechanism call LD<sub>50</sub> or Lethal Dose at 50%. The higher the number, the safer the chemical.

Following is the LD<sub>50</sub> comparison charts. Please note that ETF is 14 times safer than common salt and 2 times safer than sugar. As such, we can categorically state that ETF is Non-Poisonous Insecticide.

## Not All ETF Solutions are Make Equal

ETF is a highly concentrated chemical (99.9% pure) and must be first dissolved and diluted in solvent to apply as an insecticide.

This is how Bio-X differs from all other ETF solutions. Bio-X uses water & herbal compounds as a solvent but under general manufacturing practice, most manufacturers use low cost and poisonous solvents such as petrol, alcohol, xylene, etc. (these are general commercial solvents).

In terms of its physical properties, general commercial solvents are very good solvents, in that it can easily dissolve chemicals such as ETF.

Water is a poor chemical solvent and as such, requires much higher technological process and cost.

Even though ETF is non-poisonous, commercially available ETF solutions are pre-mixed with commercial solvents that make the total compound poisonous. Most manufacturers produce single function solutions acting as only insecticide.

By contrast, Bio-X solution being water-based is safe, multi-functional, does not stain surfaces and is eco-environmentally friendly.

In most countries, under outdated Pesticide Laws (created in the olden days with assistance from Pesticide Conglomerates with self-interest at heart) that regulate import and distribution of pesticides, manufacturers are not required to declare the content of solvents to consumer ... regardless of how toxic the solvent may be. As such, most manufacturers choose to manufacture low-cost pesticides with poisonous solvent to lower cost.

These outdated Pesticide Laws also prevent products from being labeled as multi-function and safe.

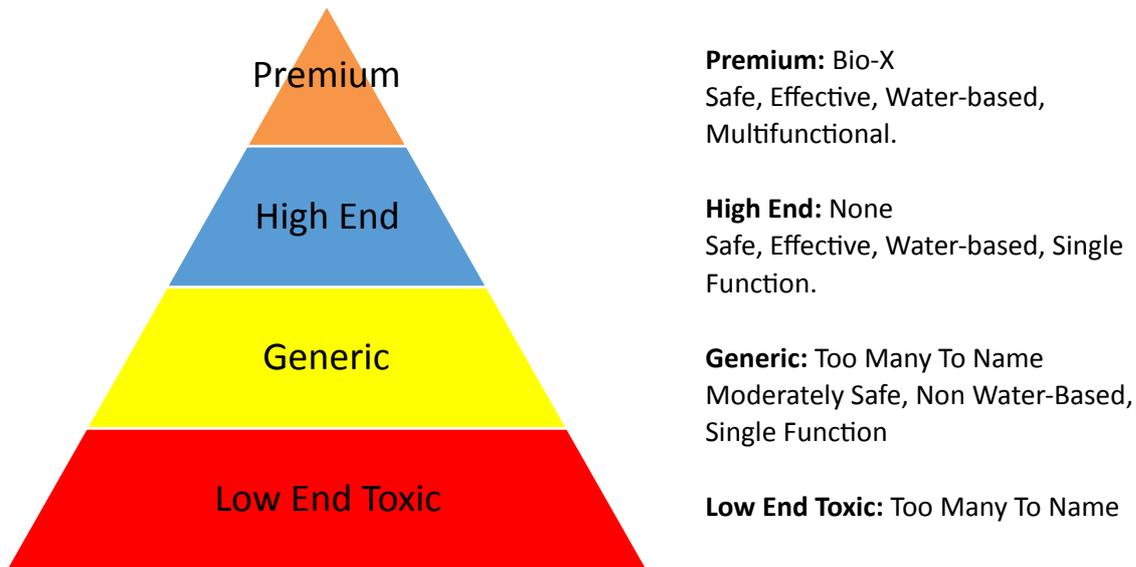
Another misleading issue needs to be highlighted is that there are Insecticide Companies claiming their solutions to be water-based but used an iron-can aerosol container for consumer use ... ironic!

- a. Water corrodes iron and when contained under high pressure in an aerosol can, it is an explosive waiting to happen.
- b. The above situation is made worse by the fact that iron-cans are welded at the edges, the side, the top and the bottom.
- c. Bio-X uses aluminum cans because water will not corrode aluminum. Additionally, the aluminum can Bio-X uses is a single piece container without any joints, thus preventing any accident from happening.

We can only draw from the fact that either the “water-based” insecticide in the iron-can is not true water-based or an explosive waiting to be happened.



## Products Ranking



- Bio-X alone occupied the Premium range.
- Many homegrown cottage industries aspired to produce High End products but fail to provide any certifiable test reports.

## Effectiveness of Bio-X

To be totally effective and provide full protection for consumers & their love ones, Bio-X fulfills the following objectives:-

- Comprehensive & provides a Holistic Approach; and
- Does not compromise on the health and well-being of your love ones, including house pets.

By delivering safe & comprehensive solution, consumers are worry free in applying the solution anywhere & anytime; in the process, flush out & eliminate all the insect pests, germs, fungus & bad odor that is hidden & unseen to naked eyes and make the surrounding truly hygienic and healthy to live in.