



Flies as the indicator for formalin untreated raw food materials: A contrary approach in sanitary entomology

Flies (Diptera: Muscidae and Calliphoridae) are often blamed for nasty habit since they favour filthy habitats and materials. They play the role of mechanical vectors for the transmission of many dangerous pathogens. Raw food materials including fruits are sold in our markets with little or no proper sanitary measures. In our country these pathogen-infested food materials can cause havoc in our public health sectors aggravating the prevailing germ-affected living bodies. However, the genotoxic and other long persistent chemical-biased environs and lifestyles have surpassed the situations. Even ionized radiations and electromagnetic fields are playing vital roles in the same direction.

In our socio-economic conditions, channelizing of the ecological components many times deviate the normal as well as the natural pathways. Since occupation, food habit and daily exposure to micro-environmental conditions are neither scientific nor health-friendly, the problems of contaminations, infestations and pollutions result into biomagnifications through bioaccumulation. The sufferings are always chronic and many times acute.

The lengthening of shelf life for the raw materials is often done with unhygienic materials keeping the economic consideration in mind. Similarly crops in the field are protected with high doses of persistent toxic chemicals through frequent and illogical uses.

For preserving most of the commodities like raw, semi-prepared and prepared food materials including milk, formalin (usually having 30-50% formaldehyde) is being used in our country rampantly. Majority of the users and consumers are ignorant of the evil effect of this chemical already earned notoriety in this regard. According to Alano (2007) formalin and other preservatives are considered harmful because they act as free radicals that lead to oxidative stress, which has been implicated in a growing list of diseases from cataract to cancer. He further opines that **oxidative stress** is fast becoming the nutritional and medical buzzword for the 21st century.

Recent anti-adulteration drives have created aware and consciousness among the consumers as well as the providers in the public. The efforts of the officials and media of our Republic are being highly appreciated. Since this is an economic issue, in many cases, it crosses the control measure barriers and the morality limits. Still the formalin-treated eatables are being marketed. In this case people are depending on the nature's magnificent tips. They are discriminating the treated commodities from the untreated ones with the help of the so-called culprit, the flies. Flies are believed not to sit on the formalin-treated materials. Folks use this trick to an extent. Scientific basis of this trick is still to be explored out. Biosensor, bio-tracers and bio-indicators are the most demanding research objects in the scientific and technological arena in the developed countries.

The precisions of the measures are still being on trial. Even nowadays forensic entomology is flourishing as a package of identifying/detecting tools for committed crimes. But the scenario in our perspective is bleak. A few attempts have been ventured in case of imported food materials to assess the clastogenicity (breaking ability of the chromosomes) through irradiation by the IFRB, BAEC, Dhaka. Furthermore, maggot therapy created a big hope in medication.

On the eve of publishing the Silver Jubilee volume of this Journal, we hope that this most-talked issue entitling the commentary would draw the attention of the scientists of our community to do something in the new vista of research.

Good luck!

Reference

Alano, C.M. 2007. Everything you're dying to know about formalin. *The Philippine Star*. July 24.

Contributed by:

M. A. Mannan

M. Khalequzzaman

M. Saiful Islam¹

Department of Zoology, University of Rajshahi, Rajshahi 6205, Bangladesh

¹corresponding author; email: saifulzoo@yahoo.co.uk