



## **TITLE: Assessment of pesticide contamination in selected vegetables collected from seven different regions of Bangladesh**

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### **ABSTRACT (up to 300 words)**

In order to assess and detect the left over residue of pesticides in three popular growing vegetables like yard long bean, hyacinth bean and cauliflower samples were collected from local market of seven different locations viz. Cumilla, Bagura, Narsingdi, Jamalpur, Gazipur, Dhaka and Jashore of Bangladesh. The vegetable samples were prepared by modified Quick, Easy, Cheap, Effective, Rugged and Safe (QuEChERS) extraction technique and analyzed by Gas Chromatography (GC) equipped with Flame Thermionic Detector (FTD). In this study, 180 vegetable samples were analyzed. Out of 60 analyzed samples of yard long bean, 11 samples (18% of the total number of samples) contaminated with chlorpyrifos, quinalphos, dimethoate and diazinon residue which were above MRL set by European Union (EU). Among 60 analyzed samples of hyacinth bean, 8 samples (13% of the total number of samples) were contained with dimethoate, chlorpyrifos and diazinon residues which were above EU-MRL. A total of 60 analyzed samples of cauliflower, 4 samples (6.67% of the total number of samples) were of above EU-MRL with quinalphos, chlorpyrifos and diazinon residues. From the study, the consumers were aware of pesticide contamination load in the tested vegetables and pre noticed to take necessary steps for decontamination of pesticides before taking vegetables. Without taking decontamination of pesticides in vegetables it might cause detrimental effect to consumers. Because the presence of pesticide residue exceed MRL in vegetables is very harmful to human food safety.

### **BIOGRAPHY (up to 200 words)**

Md. Sultan Ahmed did PhD on pesticide research in Entomology. Presently he works as a Chief Scientific Officer at Bangladesh Agricultural Research Institute, Division of Entomology, Gazipur. About 29 years of working experience in pesticide residue analysis, pesticide efficacy testing and integrated pest management on different crops. He successfully completed hands on training on GC and GC/MS Techniques, Troubleshooting at Shimadzu (Asia Pacific) Pte Ltd, Singapore; LC-MS/MS Techniques and Troubleshooting at Thermo Fisher Pvt. Ltd., UK and Insect pest management on stored grain pest at Murdoch University, Western Australia. He published 45 papers in International and National reputed Journals about pest management, Pre-harvest interval in different crops and pesticide residue monitoring in different food commodities. Most of the publications are online and available in Research gate. He also published two books, three training manuals and different booklets, leaflets and factsheets in his research area to ensure safe food production for the consumers. His major research area is pesticide research and environmental toxicology. He has guided MS/PhD students as a research Co-Supervisor. He has been serving as an editorial board member of several reputed journals.



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