

For Immediate Release



AUB study finds that most vegetables and fruits are relatively pesticide-free

Beirut, Lebanon- 29/12/2010 - Researchers at the American University of Beirut (AUB) have released the first comprehensive study covering the previously undocumented, but much talked about, risk to adults posed by pesticide residues in planted foods on sale in local markets.

The research is the first of its kind in Lebanon that combines food consumption data along with contamination data and was conducted by Assistant Professors of Nutrition and Food Sciences Lara Nasreddine and Zeina Kassaify through a jointly funded grant of some \$20,000 from AUB and the World Health Organization (WHO). The team based their study on a representative sample of the adult population of Beirut and the semi-rural area of Kisirwan by first conducting a survey of foods consumed by adults in the two regions to characterize the diet and contrive a "market basket" for each area.

The researchers then collected five different samples of each food from local markets in the Beirut and Kisirwan areas at regular intervals during 2008 and 2009 to minimize the effect of different sources producing different results.

"What we were doing was mimicking the behavior of the consumer," says Nasreddine, "because if you are going to buy something to cook you don't really know where it is coming from."

The collected samples were washed, in some cases peeled and cooked, and then prepared as they are typically consumed by the population thus reflecting the true risk posed by pesticide residues in an adult diet.

"If I do a survey on lettuce and zucchini alone this doesn't tell me anything because what I want to know is how much I am ingesting from all of this together," says Nasreddine.

The previously unreleased data shows that, on the whole, the daily dose of pesticide residues provided by foods consumed by the population are far below the toxicological reference values of "Acceptable Daily Intake" levels—those that can be ingested over a life time without adverse effects on health set by the United Nations Food and Agriculture Organization and the World Health Organization.

Out of the 43 common pesticide residues that were tested for, only 12 were detected after food samples were analyzed and many samples turned out not to contain detectable levels of pesticide residues. A major reason for this is that washing and peeling alone can considerably lower the amount of pesticide residues in food products, according to Nasreddine.

Dietary exposure to pesticide residues on a national level however will require several similar studies to be conducted, and not just once. Also, other food groups will have to be incorporated such as animal-based products because certain pesticide residues

can also be present in animal fats. Studies will also have to be conducted on other population groups such as children, who may be more vulnerable to the risk associated with pesticide residues.

“We have to be careful that this study and others of this nature are like a snapshot in time, so if the levels of contamination and pesticide application change, the ingested dose and the dietary exposure will also change,” says Nasreddine. “These studies need to be conducted regularly and we don’t have this standard in place yet.”

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Note to Editors

About AUB

Founded in 1866, the American University of Beirut bases its educational philosophy, standards, and practices on the American liberal arts model of higher education. A teaching-centered research university, AUB has more than 600 full-time faculty members and a student body of more than 7,000 students. AUB currently offers more than 100 programs leading to the bachelor’s, master’s, MD, and PhD degrees. It provides medical education and training to students from throughout the region at its Medical Center that includes a full service 420-bed hospital.

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