PESTICIDES RESIDUE ON EATABLE PART OF FRUITS AND VEGETABLES GROWN IN THE JORDAN VALLEY- JORDAN

[1]FARH M. AL-NASIR, [2]ANWAR G. JIRIES, [3]GHAID J. AL-RABADI, [4]OSAMA Y. MADANAT, [5]RASHA S. AL-DMOUR

[1,3]Faculty of Agriculture, 61710, Mutah University, Karak, Jordan
[2,4,5]Faculty of Science, 61710, Mutah University, Karak, Jordan
E-mail: jiries57@hotmail.com

Abstract - Pesticide residue wasanalysed for four types of vegetables (Cucumber, Eggplant, Zucchini andTomato) and four types of citrus fruits (Orange, Lemon, Mandarin and Grapefruit) grown in the Jordan valley using three different sources of irrigation water. Chlorothalonile was detected in all citrus fruit at very high concentrations with a mean value of 9.281 mg kg^{-1}, 14.326 mg kg^{-1}, 5.619 mg kg^{-1} and 12.575 mg kg^{-1} for grapefruit, lemon, orange and mandarin, respectively. Chlorothalonile was also detected at a high average concentration and ranged from 4.460-4.479 mg kg^{-1} in tomato, 3.155-4.029 mg kg^{-1} in zucchini, 2.572-2.702 mg kg^{-1} in eggplant and 4.783-57.640 mg kg^{-1} for cucumber. Daminozide was detected in all citrus fruit samples but at a lower concentration than chlorothalonil with a mean value of 0.736 mg kg^{-1}, 0.857 mg kg^{-1}, 1.142 mg kg^{-1} and 0.557 mg kg^{-1} for grapefruit, lemon, orange and mandarin, respectively. In vegetables, Daminozide was also detected at high concentrations in vegetables (except for zucchini) and the average values ranged from 0.434-0.599 mg kg^{-1} in tomato, 0.373-0.378 mg kg^{-1} in eggplant and 0.963-1.624 mg kg^{-1} in cucumber. It can be concluded from this study that irrigating water, soils and pesticide application are responsible for high pesticide residues in citrus fruits and vegetables examined in this study.