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# ORGANOPHOSPHORUS PESTICIDE RESIDUES IN SOIL AND VEGETABLE, THROUGH DIFFERENT GROWING SYSTEMS

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## Abstract

The intensive vegetable system means that more toxic organic and inorganic compounds are entering the environment. The aim of this study was to obtain the necessary answers on the content of organophosphorus pesticides (OPPs) regarding to quantify these residues on soils cultivated with vegetables in conventional, organic and conversion systems, and also determine which pesticide residues are going in edible vegetable parts.
A number of 23 OPPs were analyzed from soil (50 samples) and vegetables plants (25 samples) from five farms, during the year 2010. Based on analyses of the OPPs, four pesticide residues were detected both in soil and vegetable fruits samples, in the conventional farms, as: Omethoate, Phorate, Metribuzin and Phosmet. In the samples collected from organic farming, OPPs studied were not detected in any soil and vegetables. The content of OPPs residues in farms under conversion crops is decreasing both in soil and vegetables. OPPs have been detected in most samples collected from conventional farms, but residues content does not exceed the maximum admitted limits for the four OPPs, in accordance with EC Regulations (2005) and (2013).
Our research proves the fact that the three growing systems had significant influence on the level of polluting with OPPs. Organic farming ensured soil and vegetable products free of OPPs contaminants than conventional system where maintain some OPPs contaminants.

*Key words:* organophosphorus pesticides (OPPs), residues, soils, vegetables

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