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Potential of Fertilizer Types on Remediation of Pesticide Residues in Broad Bean and Soil

Shehata EM Shalaby* and Gehan Y. Abdou

Pests & Plant Protection Dept., National Research Centre, Dokki, Cairo, Egypt

Abstract: The present investigation was planned to evaluate the influence of fertilizer types on degradation of some pesticides used against broad bean pests. All tested pesticides were detected in unfertilized soil and chemical fertilizer treatments. Chlorpyrifos have the highest amount; it was detected in all analyzed samples (4.628 ppm), followed by fluazifop-p-butyl (2.976 ppm) and carbofuran (2.385ppm), while, the lowest value was noticed in indoxacarb samples (0.05 ppm) and glyphosate (0.073 ppm). The dissipation of tested pesticides was faster in organic, compost and biofertilizers treatments than other treatments. Also, despite the fact that tested pesticides dissipated more slowly in soil than in plant material, therefore, the detected amounts of these chemicals were higher in soil than those founded in both broad bean seeds and straw. On the other hand, all detected residues in seeds and been straw were below the maximum residue limits (MRL).

Keywords: fertilizer types – pesticides remediation.

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