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Dieldrin Residue in the Soil and Cucumber from Agricultural Field in Tokyo

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Abstract:
Soil samples were obtained from 814 farms in Tokyo in 2002. Dieldrin residue was detected in 85 soil samples at concentrations ranging from 0.01 ppm to 2.6 ppm. The residual amount in 70% of dieldrin-positive samples was 0.1 ppm or less. Concentrations of dieldrin residue in cucumbers cultivated in Tokyo exceeded the tolerable level (0.02 ppm) and ranged from 0.02 ppm to 0.1 ppm in 12 of 330 samples. The horizontal distribution of dieldrin in fields was not uniform and the range varied from the quantitative limit (0.01 ppm) to 0.73 ppm. The vertical distribution of dieldrin was also inconsistent. With deeply plowed fields, the vertical distribution was from the surface to a depth of 70 cm, although dieldrin was detected at 30 cm in fields that had not been plowed. As the cucumber roots grew about 1 m in the horizontal and vertical directions, we need to analyze soil samples to a depth of 1 m to prevent dieldrin residue from contaminating cucumbers. © Pesticide Science Society of Japan

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