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Glyphosate in soils used for tea production

José Luis Costa (1), Sebastian Barbaro (2), Virginia Aparicio (1), and Eduardo De Gerónimo (1)
(1) INTA, Agronomy, Balcarce, Argentina (aparicio.virginia@inta.gob.ar), (2) INTA, Agronomy, Cerro Azul, Argentina

Glyphosate is the most commonly used herbicide worldwide. Because of its non-selective mode of action, it can damage the crop exposed through spray drift. To evaluate the presence of glyphosate in tea production by spray drift, we conduct an experiment with 5 blocks and tree treatments: T1 control treatment (without application of glyphosate), T2 treatment with application of between rows, spray height 50 cm above the soil surface to increased drift potential, T3 treatment with glyphosate application with the nozzle as close as possible to the ground to reduce drifting. The herbicide dose was 3 l ha-1. Soil samples were taken at each plot, at a depth of 0-5 cm. Plant leaves were picked by hand in the middle of the plot in the exterior of the mist bed. The soil and plant samplings were taken at 30 and 60 days after the application (DDA). In soil, the average concentration of glyphosate in all treatments was 6,7 μg k-1 while that of AMPA was 96,3 μg k-1. In T1 no glyphosate residues were found, while in T2 and T3, the average concentration in T3 was greater for both sampling moments. There were residues of AMPA in all treatments including the control. In the tea leaves, the highest concentrations of glyphosate were found in T2, for both sampling moments. In the soil and plant samples, the residues of the herbicide decreased with increasing DDA.