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
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**The Effects of Glyphosate Isopropylamine and Trifluralin on the Carbon
Mineralization of Olive Tree Soils**

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Abstract: Glyphosate isopropylamine and trifluralin are herbicides widely used in Turkish agriculture. The recommended field dose (RFD) (480 g of active ingredient l⁻¹ for both glyphosate and trifluralin) and 2 x RFD of these herbicides were added to the soil of olive trees (*Olea europaea* L., Oleaceae) growing on the Çukurova University Campus (Adana) under Mediterranean climate conditions in order to determine their effects on soil microbial activity as measured by carbon mineralization. Carbon mineralization of all samples was determined by the CO₂ respiration method over 30 days (28 °C, constant moisture). When the RFD and 2 x RFD of glyphosate were compared to a control treatment with no herbicide, they significantly stimulated carbon mineralization at the end of the 30 days (P < 0.001), but the RFD and 2 x RFD of trifluralin were not statistically different from the control (P > 0.05). Based on these results, it is possible to conclude that soil microorganisms are capable of using glyphosate as a carbon source.

Key Words: Carbon mineralization, glyphosate isopropylamine, herbicide, trifluralin

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