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Impact of Leftover Tea Leaves on Rate of Flowering and Soil Fertility

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Abstract: *The main objective of our research study was to find out the impact of leftover tea leaves on rate of flowering and soil fertility. For the comparative study, three different plants were grown under two conditions; one was grown only in soil and another was grown in soil with leftover tea leaves. Tea leaves are known for helping plants to grow because of their high nutrient value. Therefore, leftover tea leaves can be directly applied on plants after proper cleaning and drying as a natural organic source of nutrients. Thus, it provides an alternative option to replace chemical-based fertilizers, pesticides and facilitates the flowering in plants and growth of stronger root system and increases soil quality for sustainable organic farming. Here, the physical and chemical parameters of the soils with tea leaves and without tea leaves were analyzed using standard procedures. The impact of leftover tea leaves on rate of flowering and soil fertility were studied on following flowering plants, namely: rose, marigold and periwinkle.*

Keywords: *Leftover tea leaves, Rate of flowering, Soil fertility, pH, Nutraceutical value, Plant growth*

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Introduction:

The botanical name of tea is *Camellia sinensis.* Tea plant is an evergreen shrub which belongs to genus *Camellia* and family Theaceae. It is the most widely consumed non- alcoholic beverages around the world after water. It is one of the most easily available items in any household. Chemically, tea leaves are composed of tanning substances, alkaloids, flavonoids, proteins and amino acids aroma forming substances, vitamins, minerals and trace elements (Jha *et al* 1996). Micronutrients such as Cr, Fe, Co, Ni, Cu, Zn are present in tea leaves while macronutrients like Ca, Na, K, Mg and Mn are also found (Cao *et al* 1998). Therefore, on the basis of the overall nutraceutical value of tea leaves, they are beneficial for promoting plant growth and soil