

The effect of soil pollution with oils used in motors and generators on *Spinacia oleracea* and *Beta vulgaris* var. *cilca* plants.

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- **Abstract:** This study was conducted to show the effect of soil contamination with used and spilled oils of motors and generator oil to the soil. Soil was treated with motors oil and generator oil and with three concentrations for each type and these concentrations are (0.5, 1.0, 1.5) % and indicate their impact on the spinach (*spinacia oleracea*) and chard (*Beta vulgaris* var. *Cilca.*) Plant. The results showed that the treatment of soil with oils used for motors and generators at concentration (1.5%) had the greatest effect on all characteristics compared to other concentrations. The results showed that the treatment of the soil with oils used for motors and generators at concentration (1.5) % led to a significant decrease in the length of the shoot of spinach, as it reached (5.5) cm. And the length of the root of spinach and chard plants reached (7.0 and 4.0) cm compared to the comparison treatment. The results also showed that the treatment of soil with generator oil at concentration (1.5) % led to a significant decrease in the water content of the leaf tissues of spinach and chard plants and reached (55,000 and 42.465) %, respectively. While we notice a significant increase in the concentration of proline in the leaf tissues of the spinach plant when treating the soil with generator oil at concentration (1.5) % and amounted to (1.827) micro mol / g fresh weight and in the chard plant when treatment with motors oil as it reached (0.987) micro mol / gm fresh weight. We also notice a significant decrease in the total chlorophyll concentration in the leaf tissues of the two plants when treating the soil with generator oil at the concentration (1.5) % and reached (1.187 and 1.215) mg / g fresh weight, respectively. There was also a significant decrease in carotene concentration in the leaf tissues of spinach when treating the soil with generator oil at concentration (1.5) % and amounted to (0.174) mg / g fresh weight and in chard plant when treating soil with auto oil at concentration (1.5) % and reached (0.167) mg /g fresh weight compared to the comparison treatment.
- **Keywords:** soil contamination, concentration , Cilca