

Effect of diesel fuel as a soil pollutant on the growth and chlorophyll a concentration of Garden Peas, *Pisum sativum*

Diesel fuel is known to limit the success of plant life in contaminated areas due to the suffocating properties it contains, such as limiting soil nutrients and salts, altering pH of the soil, increasing carbon production in the soil, and reducing the recovery ability of affected soil communities (Timur et al. 2021). Different species of plants react to contaminants in the soil in a variety of ways. Some plants are durable enough to be considered phytoremediators, which are species that can help to clean the soil of contaminants naturally (Wyszkowska 2019). Diesel fuel can have an effect on plant growth as soon as the germination stage. Päivöke 2003 found that the presence of soil contaminants can decrease the growth of a plant significantly. Diesel fuel presence in minimal amounts may not completely halt growth, but growth does decrease as the concentration of contaminant in the soil increases (Zarinkamar et al. 2013). Not only can the presence of diesel fuel affect the growth and well-being of plant life, but it can also have an impact on many other organisms in that ecosystem. Hawrot-Paw et al. (2021) found that the concentration and presence of biodiesel fuel in soil ecosystems can affect the number of earthworms alive in that area, which can end up slowing the growth of the plant. The effects of diesel fuel have the potential to do incredible harm to the environment, especially on the growth and development of plants in areas affected by contaminants present in the soil community.

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