

## عنوان مقاله:

The Effect of Corn and White Clover Intercropping on Biodegradation of Diesel Oil in Arsenic Contaminated Soil in the Presence of Piriformospora indica

## محل انتشار:

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## خلاصه مقاله:

Background: This research was done to evaluate the effect of corn and white clover intercropping on bio-degradation of diesel oil in arsenic (As) contaminated soil in the presence of Piriformospora indica (P.indica). Methods: Treatments included corn planting with three plant density of white clover (۰, ۲۰ and ۳۰ seeds per pots) as an intercropping system, As polluted soil (۰, ۱۲ and ۲۴ mg/kg soil) and diesel oil (۰, ۴ and ۸ % (W/W) in the presence and absence of P.indica . After ۱۰ weeks, plants were harvested and the soil and plant as concentration was measured using atomic absorption spectroscopy. In addition, the soil microbial activity and the percentage of diesel oil degradation were measured. Results: The results of this study showed that cultivation of corn in intercropping system with white clover (۱:۲۰ seeds corn to white clover) relative to monoculture significantly ( $P < ۰.۰۵$ ) increased the diesel oil degradation in soil by ۱۴.۶%. In addition, the soil microbial activity was increased by ۱۳.۴%. Plant inoculation with P.indica had additive effect on degradation of diesel oil in the soil. Conclusion: Plant inoculation and intercropping system can effect on increasing the percentage of diesel oil degradation in As contaminated soil that is an important role in environmental studies

## کلمات کلیدی:

Arsenic, Fungi, Soil, Pollution, Biodegradation

## لینک ثابت مقاله در پایگاه سیویلیکا:

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