

Effect of Crude oil Contamination on the Morphological Traits and Protein Content of Avicennia Marina

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Abstract : A greenhouse investigation has been conducted to study the effect of crude oil on morphology and protein content of Avicennia marina plant. Avicennia marina seeds were sown in different concentrations of the crude oil mixed soil (i.e., 2.5, 5, 7.5, and 10 w/w). Controls and replicates were also set up. Morphological traits were recorded 4 months after plantation. Avicennia marina seedlings could tolerate up to 10% (w/w). Results demonstrated that there was a reduction in plant shoot and root biomass with the increase of crude oil concentration. Plant height, total leaf number and length reduced significantly with increase of crude oil contamination. Investigation revealed that there is a great impact of crude oil contamination on protein content of the roots of the experimental plant. Protein content of roots grown in different concentrations of crude oil were more than those of the control plant. Further, results also showed that protein content was increased with increased concentration of crude oil.

Keywords : Avicennia marina, morphology, oil contamination, protein content

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