

**EXPLORING THE EFFECTS OF SOIL COMPACTION ON THE GROWTH OF
MAJOR AGROFOREST TREES OF CENTRAL PUNJAB IN PAKISTAN**

COMPLETED BY

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Mechanization of agro forested farmlands and irrigated compact plantations can result in soil compaction and can limit the trees growth and wood quality. Pakistan having only 2.5% area under forest cover is under great shortage of wood. So, trees of farmlands and irrigated plantations are highly important as they are fulfilling the major proportion of wood demands. To ensure the sustainability of wood supply, from increasingly mechanised farmlands, it is very important to analyze the possible effects of soil compaction on these farm friendly trees. In the first part of this study, field visits will be made in Faisalabad vicinity to analyze the awareness of farmers about the drastic effects of soil compaction on trees and to observe a link between the number of farm operations and soil compaction around standing trees. Field measurements will also be carried out to analyze the effects of soil compaction on the growth of standing trees. In second part of this project, pot experiment will be carried out on 8 major agro forested trees: Kikar (*Acacia nilotica*), Siris (*Albizzia procera*), Simbal (*Bombax cieba*), Sufeida (*Eucalyptus camadulensis*), Beri (*Zizyphus mauritiana*), Shisham (*Dalbergia sissoo*), Poplar (*Populus deltoides*) and Mulbery (*Morus alba*), to analyze the effect of different level of soil compactness on their germination/sprouting and growth parameters. This study will largely help us in understanding the existing level of soil compaction in mechanised farmlands and screening the soil compaction resistant trees for future plantations.