

ANATOMICAL AND MORPHOLOGICAL CHANGES IN AVOCADO TREE ROOTS (*Persea americana* Mill) EXPOSED TO CONDITIONS OF HIGH MOISTURE IN SOIL

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Avocado trees are considered to be sensitive to excessive moisture in soil. Usually high moisture levels in soil result in low oxygen levels which cause reduced leaf expansion, decreased growth of root and shoots, root necrosis and moderate-to-severe leaf abscission (Stolzy, *et al.*, 1967; Schaffer *et al.*, 1992). In the search of rootstocks tolerant to these conditions, anatomical and morphological characteristics present in an ecotype with an apparent tolerance to high moisture conditions in the soil were studied. Roots present in 2 sectors were histologically and morphologically analyzed according to their distribution, with oxygen diffusion rate (ODR) levels of 0.21 mg cm⁻² min⁻¹ (moister sector) and 0.693 mg cm⁻² min⁻¹ (drier sector), while clear differences were noticed in terms of quantity and proportion of fine (below 1mm in diameter), medium (between 1 and 2mm in diameter) and thick roots (above 2mm in diameter), and between lignified and unlignified roots. Likewise, roots histologically present in the moister sector showed an abnormal growth on the epidermis, which would indicate an anatomical response in avocado tree roots growing in high-moisture conditions.