ABSTRACT

THE EXAMINATION OF WOOD TISSUE RESISTANCE STATUS IN TERMS OF MECHANICAL AND BIOCHEMICAL METHODS IN SOME CULTIVATED (*Olea europaea* L.) AND WILD OLIVE CULTIVARS

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Lignin, forms the wood tissue of stem and root of all develop plants. Some researches showed that the lignin gained the resistance to disease and pest of plants. Recent studies indicated that lignins, which applied the soil, has a surpassing effect on microsclerotia amount and viability. This study was aimed investigate of wood tissue hardness in terms of mechanical and biochemical in some cultivated and wild olive cultivars and it also reveal that lignification situation of differentiation among cultivars.

The wood tissue hardness measurements indicated that Gemlik cv. was found highly resistant in two terms than others. The vast lignin content was observed in Gemlik cv. depending on kroma (c*) and hue° (h°) values. Assessment of stem lenght up to equal stem thickness (stem radius) there was no significantly different between Gemlik and Manzanilla cv. in terms of length measurements and Gemlik cv. was second order with 25.50 cm. mean. There was no statistically significant in means of fresh density. Dry density measurements showed that Gemlik cv. was found high values with Memecik cv. and Delice in two terms. Delice was showed high values and Gemlik was found lower values in terms of the measurements of extent of xylem. As result of measurements the lignin content of Gemlik cv. was higher than the other cv. and Delice. In addition, this research results will be lighten the further researches about selection of resistant rootstock and cultivars to '*Verticillium dahliae*', which is one of the most important phytopathological problem of olive.

Keywords: Hardness of tissue, Lignin, Olive, Wood tissue.