Oral Presentation OP-04
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The Preliminary Results of the Effect of White Mistletoe (*Viscum album* ssp. *abiteis*) on Radial Growth of Cilician Fir (*Abies cilicica* ssp. *cilicica*)

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Abstract

White mistletoe (*Viscum album* ssp. abietis, *Santalaceae*) is a hemi-parasitic plant that have various effects on their hosts, including changes in wood formation and growth. This study presents the preliminary results of a 20-year retrospective analysis of the radial growth of Cilician fir (*Abies cilicica* ssp. *cilicica*) in relation to the severity of white mistletoe infection. The study was conducted in white mistletoe infected pure cilician fir forest in Emli Valley within the boundaries of Aladaglar National Park in Nigde, Türkiye. Of the sampled trees, a total of 20 cilician fir trees were selected and analyzed for the preliminary results. Of these trees, 5 were uninfected, 5 lightly infected, 5 moderately infected and 5 highly infected. The 6-class dwarf mistletoe rating system (DMRS) was used to define the infection severity. Increment cores were taken at breast height level (1.30m) of each sampled trees. Increment cores including annual rings of the last 20 years were cut off from the bark to pith with razor blade. Transverse sections were obtained from increment cores with a sliding microtome at 15-20 µm intervals. Then the sections were stained with safranin and were embedded glycerine-gelatine. All sections were examined with Olympus BX50 digital photomicroscope and each annual ring width measured using Bs200ProP image analyze software (BAB Imaging Systems Ltd, Ankara, Türkiye). The preliminary results of the radial growth of white mistletoe infected cilician fir trees showed that average radial growth losses were up to 60% in highly infected trees.

Keywords: Mistletoe, *Viscum album*, *Abies cilicica*, growth loss.