

ABSTRACT

MSc. Thesis

GRAFTING ABILITY OF CHESTNUTS (*Castanea sativa* L.) ON OAKS (*Quercus* sp.) AND ANATOMICAL DEVELOPMENT OF GRAFT COMPATIBILITY AND SEASONAL CHANGES OF TOTAL FLAVAN CONTENT

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This study has been carried on during 2005 – 2007 in order to determine the graft ability and anatomical development of graft compatibility of chestnut and oak plant, and the seasonal changes of total flavan content in oak tree. Chip budding, whip budding and T budding methods have been used and it was seen that only whip budding had budding success. In order to determine anatomical and histological development of graft compatibility in plants grafted by whip budding, cross and longitudinal sections taken from budding region 30, 60, 90, 120, 150 and 210 days after the budding have been examined by microscope. It is found that callus tissues from rootstock and scion began forming after 30 days from grafting; cambial continuity occurred after 150 days from grafting. Aiming to determine the best grafting, floem examples have been taken from the shoots of oak trees during vegetation period; April, July, September and December, and seasonal changes of total flavan contents have been determined. The minimum flavan amount has been determined as 0,102 mg/g in April.

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Key Words :

Chestnut, oak, grafting, graft compatibility, flavan content