

Telci I, Kacar O, Bayram E, Arabacı O, Demirtas I, Yılmaz G, Özcan I, Sönmez C, Göksu E (2011) The effect of ecological conditions on yield and quality traits of selected peppermint (*Mentha piperita* L.) clones. *Industrial Crops and Products*, 34: 1193–1197.

Abstract

The commercial production of peppermint (*Mentha piperita* L.) depends on the genetic structure and ecological conditions affecting yield and oil composition. To determine yield and quality characters of two peppermint clones (Clone-3 and Clone-8), field experiments were carried out at four different locations (Aydın, Bursa, Izmir and Tokat) in Turkey during 2007 and 2008. Locations with warmer climate gave higher fresh herbage yield (Aydın and Izmir 37.0 t/ha and 36.8 t/ha, respectively). Although vigor canopy caused maximum fresh herbage yield, it decreased dried leaf yield due to the defoliation of leaves near to the ground. The main components menthol and menthone showed significant variation with different ecologies. Menthol contents were higher in temperate locations (Bursa and Tokat), while menthone contents were lower. The differences in oil composition of Clone-3 were lower than that of Clone-8 according to different climates, thus Clone-3 can be grown widely in various ecological conditions for oil productions as compared to the Clone-8. It was also concluded that temperate location was more suitable for peppermint oil production with high menthol contents.