

Title	Obtaining of New Genotypes from Avocado ‘Hass’ Variety by Mutation Breeding
Number	TAGEM/BBAD/15/A08/P02/
Leader	M. Alper Arslan
Researcher/es	Dr.Süleyman BAYRAM, Zeynep ERYILMAZ, Süleyman Fatih ÖZMEN
Budget	29500
Periods	15/03./2015. - 15/03./2020
Organization of Funding Sources	Akdeniz University Faculty of Science Department of Physics , Avocado Producers Association

Abstract:

Abstract: Origin of the avocado (*Persea americana* Mill.) is Central American countries, coastal region of North America and East Indian Islands. The avocado is a tree native to subtropics and grown in nearly 50 countries in 5 continents.

Mostly growing region of the avocado in Turkey is in coastal areas of Mediterranean. The new cultivars to be adapted in the target areas in Turkey and accepted in the markets of the world are of importance in order to promote position of Turkey. In this sense, studies on selection, crossing and mutation breeding in avocado should be started in short term.

Breeding studies for increasing in yield are ongoing project in many countries in the world. Mutation techniques created from radiation are new in avocado breeding. Conventional breeding methods are very difficult and need long time. Mutation breeding techniques are novel fashionable methods to improve new avocado cultivars.

There is no study on avocado breeding via mutation techniques in Turkey. This study will be the first on mutation breeding of avocado in Turkey.

Optimal mutation doses via gamma ray were detected as 13-17 Gy on ‘Hass’ cultivar in Mexico (E. De La Cruz T: and M.Rubi A., 1995). This project is aimed to select for higher yield, bigger fruit size and better quality than that of ‘Hass’ cultivar after irradiation, and to improve the first native cultivars in Turkey.

With these aims, the scions of ‘Hass’ cultivar will be irradiated with 15, 20 and 25 Gy using by gamma ray from a source of Co⁶⁰ and then M1V3 generation will be created in growth apex of scions.

Keywords: avocado, mutation, gamma ray, GR₅₀