OP317

Clonal Almond Breeding by Crossing in Turkey

Halit Seyfettin ATLI[1], Canan CAN[2], Mehmet BAS[3], Kamil SARPKAYA[4], Ayse FIDANCI[3], Ertugrul ILIKCIOGLU[4], Nergiz COBAN[4], Sultan BAY TURKOGLU[2]
[1]Siirt University, Agricultural Faculty, Department of Horticulture-Siirt, Turkey
[2]Gaziantep University, Department of Biology-Gaziantep, Turkey
[3]Ataturk Horticultural Central Research Institute-Yalova, Turkey
[4]Pistachio Research Institute- Gaziantep, Turkey
hsatli@yahoo.com

Aim of the study: This project was conducted to breed nematode-resistant clone rootstocks in almond that is limited in our country. Throughout the three-year-study (2012-2014), some targeted rootstock candidates were obtained after hybridization between almond and plum.

Material and Methods: Some characteristics which are strong growth ability, compatibility to other almond cultivars, nematode resistance and rooting were gathered in hybrid almond types. In hybridization studies, one almond cultivar (Ferragnes) and two plum species (Myrobalan and *Pissardi nigra*) as female parents and two plum (Myrobalan and *Pissardi nigra*), two almond cultivars [Ferragnes and AB3 (*Amygdalus orientalis* Mill. Type)] as male parents were used. Totally, a six-combined hybridization was made. Those were; Myrobalan x Ferragnes, Myrobalan x AB3, *Pissardi nigra* x Ferragnes, *Pissardi nigra* x AB3, Ferragnes x Myrobalan and Ferragnes x *Pissardi nigra*. Nematode-sensitive parents (AB3 and Ferragnes) were not cross-hybridized. Pollen vigor, pollen germination, fruiting ratio and nematode-resistance were investigated in parents. Seedlings that were gained by six-combined hybrids (F1) were planted to area with the spaces of 1 x 0,5 m Growth, grafting success, budding affinity, nematode-resistance of seedlings and rooting of cuttings were examined. Some characteristics of hybrids such as budding affinity, nematode-resistance and rooting of cuttings were considered and results were evaluated according to the weight-rank method.

Results: In consideration to selected characteristics, the highest scored hybrids [FS2 (810), FS19 (810), FS22 (780), FS23 (720) and FC4 (720) were evaluated as nematode-resistant almond rootstocks clone candidates.

Acknowledgments: This study was supported by the Scientific and Technological Research Council of Turkey (TÜBİTAK) with project number 111O133.

Keywords: Almond, clonal rootstock, hybridization, affinity, nematode.