

<b>Title</b>	The Development of Qualified F4 Inbred Lines for Melon Breeding Programmes and Seed Technology Project
<b>Number</b>	TAGEM/BBAD/10/A09/P01/15
<b>Leader</b>	Zir. Yük. Müh. Mine ÜNLÜ
<b>Researcher/es</b>	Dr. Rana KURUM, Dr. Abdullah ÜNLÜ, Dr. İlknur POLAT, Dr. Akın TEPE
<b>Budget</b>	175 000 TL
<b>Periods</b>	01/01/2015 - 31/12/2019
<b>Organization of Funding Sources</b>	General Directorate of Agricultural Research and Policies (GDAR)

### Abstract:

Melon (*Cucumis melo* L.) is an economically important vegetable in our country and significantly grown in almost all agricultural regions. Although the standard varieties of melon are used in open field, the use of hybrid varieties has increased in greenhouse cultivation in recent years as well as other vegetables. The purpose of this project is to improve new melon hybrids to meet market demand, suitable for greenhouse production, high yielding, earlier, resistant to biotic and abiotic (salt) stress conditions and transport. Also, the increasing production of local hybrid varieties is aimed. With the project disease resistance/tolerance studies through conventional and molecular tests are done. The resistant/tolerant materials are selected through conventional and molecular tests of summer and winter melon lines in gene pool against *Fusarium* wilt (0, 1, 2, 1-2 races of *Fusarium oxysporum* f. sp. *melonis*) and powdery mildew (*Podosphaera xanthii*, race 5) affecting yield and quality negatively. These selected materials are used in development of local hybrid melon varieties. Also, the improved lines and varieties have been transferred to private companies such as “CUMRA” and “ANANAS” and presented to the service of country agriculture. Within the studies ongoing in this direction, the melon hybrid variety “UNLU” with production permission in 2014 has been trialed the aim of extension in farmer greenhouses in different locations. In the subsequent period of the project; inbreeding in summer and winter melon segregating lines, classical and molecular disease testing, morphological characterization of inbred (pure) lines and determination of general combination abilities of all pure lines by crossing with a line known heterosis power, detection of specific combining abilities of inbred lines with high general combining ability, selection of F<sub>1</sub> hybrid variety candidates, determination of performances of candidate hybrids in different locations and establishment of yield trials of candidate F<sub>1</sub> hybrids with hybrid commercial varieties, registration of F<sub>1</sub> hybrid varieties will be held.