Yeditepe University Department of Genetics and Bioengineering

R&D and Production Greenhouses

Yeditepe University, Department of Genetics and Bioengineering, R&D and Production Greenhouses consist of 3000m^2 modern closed glass greenhouse and hangar area within a 9500 m^2 land. Greenhouse operates with four different sectors; Plant Tissue Culture Adaptation Area, Plant Growth Area, R&D Studies Area and Service Area for Producers/Industry. The greenhouse works with full automation. Irrigation, heating, cooling, air conditioning, humidification, ventilation, fertilization and curtain systems are all computer-controlled with full automation system. In plant irrigation, water is saved by using the drip irrigation technique. In addition, energy efficient greenhouse lighting is provided with Greenhouse LED Lighting systems (Grow Light Technology).

Adaptation of plants, produced as a result of plant tissue culture studies in our plant biotechnology laboratories, is carried out in tissue culture adaptation sector. Until now, adaptation studies have been carried out with commercially important plants such as stone fruit rootstocks, Turkish hazelnut varieties, stevia, orchid varieties, coffee, lavender and sweet potato. Aforementioned plants are produced for mass propagation as pathogen-free. These plant species are also used as biological material in our research studies. Plant Biotechnology group mainly focus on agricultural improvement against abiotic stress (in particular drought and salinity), conservation of genetic resources (via the use of DNA barcoding, Molecular Markers and Cryopreservation) and production of bioactive molecules using plant cell suspension culture. In the R&D sector, in order to contribute to agricultural improvement, abiotic stress and physiology studies and other research projects funded by different national institutes such as TÜBİTAK and TAGEM are performed. In the plant growth sector, in parallel with our working activities, conservation of different strawberry, genotypes, sweet potato and wheat varieties, saffron and salep plants is performed as well as production of plants such as tea, aloe vera, succulent plants, ornamental plants, medicinal and aromatic plants. In the service area sector, commercial production of different tomato and pepper varieties is carried out and the products are sent to Yeditepe University to be used in the campus restaurants. In the service area sector, service or consultancy is provided for the industry and also commercial production of different tomato and pepper varieties is carried out. These commercial products are sent to Yeditepe University to be used in campus restaurants.

Dr. Bahar Soğutmaz Özdemir

Genetik ve Biyomühendislik Bölümü