Tropentag, September 20-22, 2023, hybrid conference

"Competing pathways for equitable food systems transformation: Trade-offs and synergies"

Sustainable production of pistachios in dealing with climate change in central plateau of Iran

Narges Saffar

SIPCEM Alumni Network, Iran

Abstract

The topic of sustainable production of pistachios in the face of climate change is relevant in the context of food and agroforestry systems because pistachios are an important horticultural and agricultural product in Iran, with a high export value. Climate change poses a threat to the production of pistachios in central Iran, which has a unique habitat and climate for cultivating pistachios.

In Iran, 90 varieties of pistachios are cultivated in an area of 530000 hectares, of which about 100000 hectares are related to pistachio seedlings. Compared to its competitors (American pistachios), Iranian pistachio nuts have the highest amount of fat, about 56 %, which, in addition to its beautiful appearance and unique taste, has distinguished it from other pistachios in the world.

The increase in temperature, changes in rainfall volume, intensification of drought in desert and subtropical areas, and change in the level of surface and underground water sources have made it challenging to maintain the production volume and quality of pistachios. Sustainable production of pistachios in Iran requires identifying approaches and solutions to combat climate change including the use of low-chill cultivars, controlling pests caused by climatic stress, and selecting the correct location for establishing new gardens.

To achieve a in achieve a high-quality product and sustainable production, it is also important to consider growth factors and stress indicators, including cold demand, watering rate, soil salinity, etc. in all stages from pollination and flowering to crop growth.

By applying these measures, it is possible to achieve high-quality pistachios and sustainable production that can contribute to food security and support the agricultural systems in Iran.

Keywords: Climate change, dehydration, export value, Iran, low-chill cultivars, pistachio, *Pistacia vera*, sand and dust

Contact Address: Narges Saffar, SIPCEM Alumni Network, Fereshteh Azadi, 17677-18686 Tehran, Iran, e-mail: parsnarsis@gmail.com