OP370

# The Positive Impacts of Modern Irrigation Systems on Agricultural Biodiversity: A Case Study of Nevsehir-Derinkuyu District in Turkey

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**Aim of the study:** This study was carried out with the aim of revealing changes in agricultural product diversity through the use of modern irrigation systems in Nevşehir-Derinkuyu District of Turkey. In order to increase agricultural biodiversity, agricultural application processes have to be done effectively and appropriately. Especially in areas where irrigation technologies are used effectively, the diversity of agricultural production is increasing. Water is indispensable for the life of plants. In this context, the variability of agricultural production is limited only in rains-related agricultural production model. However, the diversity of agricultural production varies with the increase in the interaction with water resources. In particular, the application of modern irrigation techniques ensures that the root zone of the plant is constantly moistened and helps to keep plants from suffering drought stress. Differences in agricultural product design will come into play due to the use of modern irrigation systems such as drip, sprinkler, micro and center pivot irrigation systems.

**Material and Methods:** This study was carried out by comparing the values obtained from Turkish Statistical Institute of the beans data of Derinkuyu district of Nevşehir with the irrigation practices of years. In this reseaech area, the region of Nevşehir which is the most concentrated due to the diversity of agricultural production is Derinkuyu district. In recent years different kinds of agricultural products have started to be cultivated in this region with the application of modern irrigation systems. The widespread use of irrigation technologies in the region has increased the cultivation of especially dried beans, clover and cookies and has allowed the opportunity to grow in different agricultural products that are not cultivated at all.

**Results:** In this research aresa, The amount of dry bean cultivated in the irrigated area of Nevşehir in Derinkuyu district in 2012 year was 25 decares in the total amount of dried beans was 7.7 thousand tons while the usage rate of modern irrigation methods increased to 40.5 decares and 14.4 thousand tons in the same area in 2014 year. In the 2016 year, 57.5 decares of dry bean production amounting to approximately 23.2 thousand tons. With the use of modern irrigation methods, there is a visible change in agricultural production diversity. With the use of modern irrigation methods, there is a visible change in agricultural production diversity. Farmers in this area have turned to alternative agricultural products and have contributed positively to increased biodiversity in the region. The use of modern irrigation technologies is more impacting on biodiversity and providing all the infrastructure support needed to increase such irrigation practices and increasing agricultural support will inevitably be ignored.

**Keywords:** Agricultural Biodiversity, Modern Irrigation Systems, Nevşehir-Derinkuyu District.