

Plant Supporting Units (Ekobox) Application Project for Increasing Planting Success in Arid and Semi-Arid Areas

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Abstract : In this study, samples of plant types including rose hip (*Rosa canina* L.), jujube (*Ziziphus jujube*), sea buckthorn (*Hippophae rhamnoides*), elderberry (*Sambucus nigra*), apricot (*Prunus armeniaca*), scots pine (*Pinus sylvestris*), and cedar of Lebanon (*Cedrus libani*) were grown using plant supporting units called Ekobox and drip irrigation systems in the Karapınar, Konya region of Turkey to reveal the efficiency of Ekobox and drip irrigation compared against a control with no irrigation. The plant diameter, height, and survival rates were determined, compared with each other, and statistically analyzed. According to the statistical analysis of the results, Ekobox applications resulted in the highest values for survival rate, diameter, and height measurements whereas the lowest values were determined in the control groups. These results indicate that the cultivation of plants with Ekobox may help protect against the loss of fertile soils as an effective mechanism for combating erosion and desertification. These advantages may also lead to a lasting economic effect on the cultivation of plants by locals of the Karapınar, Konya province who suffer from an ever-decreasing underground water level as a result of agricultural consumption.

Keywords : drip irrigation, ekobox, plant diameter, plant height, plant survival rate

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