

Effects of Growing Media and Water Regimes on Growth, yield and Water Use Efficient of Squash (*Cucurbita pepo*).

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Abstract.

Field experiments were carried out, at the Agricultural Experimental Station Farm, College of Agriculture, King Saud University Located at Deerab, 50 km South of Riyadh, Saudi Arabia in tow seasons (2002 -2003). The treatments used were as follows: Three natural deposits applied at depth of 20 cm at three rates (0, 1.0 and 2.0%) and four irrigation levels (60, 80, 100 and 120% of ETo) using surface and subsurface drip irrigation. Results indicated that squash fruit yield was significantly increased with the increase in irrigation level, whereas WUE significantly increased then decreased at the highest irrigation level. The average yield increased by 11.66% in high irrigation level compared to moderate irrigation level, and decreased by 39.06% at the more stressed irrigation level. WUE increased by 7.58% at high irrigation level and decreased by 33.0% at stressed irrigation level. Types of clay deposits significantly affected fruit yields compared with the control. The yield increase was 12.78, 8.32 and 6.38% for Khulays, Dhurma and Rawdat clay deposits, respectively. The differences between surface and subsurface drip on fruit yields and WUE were also significant. Results indicated that moisture content of subsurface treated layer increased dramatically, while salts were