

## Some Factors Controlling the Morphology and Productivity of Phoenix dactylefer Variety Khlis in Al-Hassa Oasis

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**Abstract.** The Khlis date palm tree is one of the most important crops which grow in al-Hassa Oasis. The production quality of the Khlis date palm is one of the best dates worldwide. In the last 30 years, date palm farming has faced several problems which led to a decrease in production. The main objective of this study is to determine which of the study variables are more correlated and effective in Khlis date palm morphology, and thereby production.

About 150 Khlis trees have been studied in about 30 farms in different spots in al-Hassa Oasis. Data analysis was carried out by the use of correlation coefficient, multiple regression and stepwise equations. The effectiveness of the independent variables is about 70%, 69% and 60% in the volume head of the Khlis date palm, stem diameter of the Khlis date palm, stem length of the Khlis date palm and the production of one Khlis date palm, respectively. The morphology variables of Khlis date palm, fertilizer variables and groundwater table variable are the only variables which were entered in the stepwise model.