

NATIONAL FERTILIZER PROGRAM FOR DATE PALM

A.M. Elprince and A.H. Al Saeedi

Water Studies Center, King Faisal University, Al-Hassa, Kingdom of Saudi Arabia.

The goal of this project is to establish bases for estimating fertilizer requirements of date palm from nominated site variables. To this end a series of 40 fertilizer experiments over a period of two successive years are planned to provide a sampling of the fertility in the 7000 ha date-growing of Al-Hassa oasis. The experiments are planned to have the same design with the 16 factorial combinations of relative treatment rates 0,1, 2, and 4, all replicated in two blocks so that the results of each could be represented by a square-root regression in N and K. *Yield variable* data values can, then, be calculated from these regressions and treatment rates. In addition, *site variables* will be measured, including soil tests for N and K, soil texture, organic matter, soil pH, soil salinity, depth to water table function, date palm age, and cover crop N and K maintenance rates. Regressions will be established between the *yield variables* and the *site variables*. These regressions (called general model) will be incorporated into a software for making the statistical best estimates for fertilizer recommendations based on the general soil fertility model and nominated values of site variables. The project can be extended to the other date-growing regions in the Kingdom and the development of the national fertilizer program for date palm. The project is financially (S.R. 1.23 millions) supported by SABIC, the Saudi Basic Industries Corporation.

EFFECT OF POTASSIUM FERTILIZATION AND BUNCH THINNING ON THE YIELD AND THE ANNUAL OF LEAVES AND FLOWER CLUSTERS OF ZAHGLOUL DATE PALMS

M.A.O. Bamiftah

**Horticulture Section, Agricultural Research Center, P.O. Box
9041, Fax (+967)5403187, Seiyun,
Hadhramout Governorate, Yemen.**

This study was carried out during two successive years of 1998 and 1999, in Alexandria, Egypt, to study effect of four levels of potassium fertilizer and three methods of fruit thinning on yield, fruit quality of "Zaghloul" date palms. This experiment was designed as randomized complete blocks with four replicates. The study included four levels of potassium sulphate (48% K_2O) and three methods of thinning. The potassium sulphate levels were: k_0 (control); K_1 , 1.0; K_2 , 2.0 and K_3 , 3.0 (kg K_2SO_4 per palm). In addition, the thinning treatments were: th_0 , without fruit thinning; Th_1 , early fruit thinning: the tips of all strands were cut back enough to remove about one third of the total number of fruits at time of fruit set and Th_2 , late fruit thinning: the entire strands were cut from the center of all bunches enough to remove about one-third of the total number of fruits 6 weeks after fruit set. Yield/palm were greatly increased with the potassium fertilization as compared with the control in both 1998 and 1999 seasons. While, they were markedly decreased with the early and late fruit thinning in both seasons. The potassium fertilization markedly increased the new leaves and flower clusters / palm year in comparison with the control in both seasons. Both new leaves and flower cluster were not effected by both early and late thinning in two seasons.