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THE RESPONSE OF CUCUMBER GROWN FOR SEED, TO SOIL FERTILITY AND TO
MANURE AND NITROGEN APPLICATIONS.

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Abstract

The effect of soil fertility factors resulting from different manuring and fertilization treatments, on yield and quality of cucumbers for seed production, was tested in the "permanent plots" in the Negev, Israel.

The permanent plots consist of four treatments with organic material (30 and 90 t/ha of cattle manure, 30 t/ha city compost and no organic amendment) combined with four levels of N fertilization (0, 1, 2 and 3). In the present experiment, manure compost and nitrogen were applied. The amounts of N applied (half at planting) were 0, 60, 120 and 180 N kg/ha. Phosphorus and K fertilizer were uniformly applied. The experimental treatments resulted in large differences in the concentration of available N and P in the soil. Increasing the level of available N led to an increase in the total (shoot and fruit) weight of dry matter. High doses of N. ~~given as manure plus the higher levels of N,~~ reduced both the number of fruits per plant and the 1000-seed weight and consequently of total seed yield. The highest seed yield was obtained where manure was applied without any N, or with the low level of N.

The effects of the treatments on other plant components, including their chemical composition, are discussed.

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