

EFFECTS OF NITROGEN FERTILIZATION ON THE RATE OF OIL FORMATION IN SUNFLOWER SEEDS

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Investigations were carried out on oil formation in sunflower seeds for two years at the experimental site of the Institute of Agricultural Research and Training, University of Ife, Ibadan, Nigeria. The main objective was to determine whether the rate of oil accumulation in sunflower seeds could be influenced by nitrogen fertilization. There were twelve treatment combinations of six nitrogen levels - 0, 30, 60, 90, 120, 150 kg N/ha and two sunflower cultivars - Vniimk and Peredovik. Results showed that the rate of oil formation was not significantly affected by nitrogen fertilization until the seed moisture content reached 18.1%. The accumulation of oil in the seeds was significantly increased when 90 kg N/ha was applied. Higher doses of nitrogen decreased the rate of accumulation of oil. The rate of oil formation was highest at a moisture content of 11%. It was detected, however, that higher nitrogen treatment than 90 kg N/ha did not influence the rate of oil formation when only filled seeds were used for oil content determination. No varietal variation in the rate of oil formation was observed in this study.