EFFECT OF CYTOKININ ON BIOLOGICAL NITROGEN FIXATION IN CHICKPEA

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ABSTRACT

The aim of this study is to understand the evolution of Cytokinin affect on biological nitrogen fixation in chickpea. Azad, Hashem and Local mass cultivars and four levels of cytokinin including: control (non-consumption),5, 10 and 15 ppm were studied. . The results showed that there is a significant difference between cultivars regarding shoot dry weight, nodule dry weight, grain yield, nitrogen percent and fixed nitrogen amount by nodule, shoot, grain and total nitrogen-fixed by plants. Local mass and Azad had the highest(141/1 kg/ha) and the lowest(121/9) amount of nitrogen fixation respectively. 10 ppm treatment (143 /1kg/ha) and control (121/9 kg/ha) had the highest and lowest amount of nitrogen fixation respectively. Of the total nitrogen fixed by the plants, 51/9, 40/4 and 5/7 percent, were accumulated in shoot, grain and nodes respectively. Generally, the highest amount of nitrogen fixed was obtained by local mass in 10 ppm.

KEYWORDS: Chickpea, Biological Nitrogen Fixation, Cytokinin, Cultivar, Nodule, Shoot