

APPLICATION OF NPK FERTILIZER DOSAGE AND PACLOBUTRAZOL CONCENTRATION ON GROWTH, YIELD, AND QUALITY SUNFLOWER PLANTS

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ABSTRACT

The low quality of sunflower cultivation as cut flowers is currently unable to meet local market demands. It is necessary to improve cultivation through fertilization and the provision of PGR. The research aims to determine the growth response, yield, and quality of sunflower plants (*Helianthus annuus* L.) on the application of NPK fertilizer doses and paclobutrazol concentrations. The research was carried out from September 2022 - December 2022 in the experimental garden of the Faculty of Agriculture, Yogyakarta "Veteran" National Development University. The research method is a field experiment arranged in a factorial Randomized Complete Block Design (RCBD) consisting of 2 factors. The first factor was the dose of NPK fertilizer (9 grams/plant, 10 grams/plant, 11 grams/plant) and the second factor was the concentration of paclobutrazol (10 ppm, 50 ppm, 90 ppm). The data were analyzed using Analysis of Variance followed by Duncan's Multiple Range Test (DMRT) with a level of 5%. The results showed that there was an interaction between the NPK fertilizer dose of 9 grams/plant and the concentration of paclobutrazol 90 ppm giving the best growth and yield on flower number and flower diameter. NPK fertilizer dose of 9 grams/plant gave the best results on the plant height parameter of 42 HST. The paclobutrazol concentration of 90 ppm gave the best results on the parameters of plant height 42 HST, stem diameter, number of leaves 42 HST, and length of flower bloom.

Keywords: sunflowers plant, NPK fertilizer, paclobutrazol