

CORRELATION ANALYSIS OF N AND P NUTRIENT AVAILABILITY WITH NPK FERTILIZER ON GROWTH AND YIELD OF PURPLE SWEET POTATO

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BACKGROUND :

Sweet potatoes have great potential as an alternative food ingredient, even as a staple food in some areas because of their high carbohydrate content. Various types of sweet potatoes can be cultivated, such as sweet potatoes with white, yellow, and purple tubers. Sweet potatoes with purple tuber flesh contain many anthocyanins that act as antioxidants that bind free radical groups as cancer prevention and anti-aging drugs. Considering its high nutritional content, efforts are needed to develop purple sweet potatoes which can be achieved through extensification and intensification. Extensification efforts are faced with using marginal lands characterized by low soil fertility. Therefore, efforts are needed to improve soil fertility by fertilization. This study was conducted to analyze the relationship (correlation) between the availability of N and P nutrients with NPK fertilization on the growth and production of purple sweet potato plants.

METHOD : The study was conducted in the form of a field trial in Takalar Regency which lasted for approximately 5 months. The experiment was designed with a randomized block design consisting of four NPK fertilization treatments, namely 0 kg/ha, 100 kg/ha, 200 kg/ha, and 300 kg/ha. Each treatment was repeated four times to obtain 16 experimental units. The variables observed in this study were the levels of total N, available P, plant length, number of tubers per plant, tuber weight per plant and tuber per ha.

RESULTS & DISCUSSION: The results of the study showed that NPK fertilization had a significant effect on increasing the availability of N and P nutrients. The increase in nutrient availability was followed by an increase in plant growth and the weight of purple sweet potato tubers.

CONCLUSION : The results of the study showed that NPK fertilization had a significant effect on the availability of N and P nutrients, and also had a significant effect on the growth and production of purple sweet potato plants.

KEYWORDS : Correlation, Fertilizer, Growth, Nutrient Availability, Sweet potatoes, Yield