The Influence of Soil Nutrients Availability on Banana Bunchy Top Disease Incidence in Banyumas Regency, Central Java Province, Indonesia

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Abstract	The banana bunchy top is one of the important diseases on bananas, presumably coupled with the influence of soil properties, despite no fixed information regarding their relationship. Therefore, this study aims to map the soil nutrient contents at some banana plantation center and determine the effect of nutrient availability on the incidence of banana bunchy top disease (BBTD). This study set a purposive sampling according to the banana cultivation distribution to gain soil samples and data on BBTD incidence. Soil samples were analyzed for macronutrient content, including N capacity using the Kjeldahl method, Bray method for P analysis, and CH4OAc methods for K analysis. According to the investigation, the range of total N was 0.2% to 0.75%, showing BBTD incidence from 5.8% to 9.47%, respectively. In line with the total P, BBTD incidence increased from 8.03% to 9.62% in the P content of 15 to 35 ppm. In contrast, in the total K of 0.5 to 1 cmol(+) kg-1, the BBTD incidence tended to decline from 9.68% to 9%. It was concluded that BBTD incidence would increase with the higher levels of N and P but decrease with the higher K. In Banyumas Regency, BBTD incidence increased in the altitude range of 100 to 300 m above sea level, then decreased at a higher altitude. BBTD incidence also exhibited an unstable response to pH changes. Bunchy top disease incidence was the highest between pH 5 and 8. This could be a guide to soil management to reduce
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