

# aline-Resistant Paddy Macronutrient Content Response to The Saline Source Distance

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## ABSTRACT

The impact of salinity on paddy production in Indonesia was pronounced with an average decline of 6.83% (2015-2019). Salinity interferes with macronutrients absorption into plants, causing stunted growth (salinity contributed to a 42% decrease in paddy production). One solution to solve the salinity problem in paddy is to use saline resistant varieties. There were very few studies on macronutrient content analysis in resistant varieties response to the salinity source's distance. This research conducted in Jabon sub-district, Sidoarjo district, East Java, Indonesia, aims to see the macronutrient response and plant growth to the saline source's distance. This research using two transects with a length of 2 km and 3.4 km, respectively. The distance between the research location and the salinity source was 10.65 km. The survey used a free grid to adjust paddy field's location and the presence of resistant varieties. The results showed that the closer to the salinity source, the salinity indicators consisting of electrical conductivity, sodium adsorption ratio, exchangeable sodium percentage, and pH H<sub>2</sub>O would increase. The increase in salinity then affects the decrease in macronutrients (N, P, and K) in plants. However, tillers and leaves (length and number) were unaffected by high salinity levels in the soil.

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