

**APPLICATION OF POTASSIUM FERTILIZER AND RICE HUSK
CHARCOAL ON THE GROWTH AND YIELD OF WAXY
CORN (*Zea mays ceratina*)**

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ABSTRACT

Fertilizing is one of the ways to increase the growth and yield of waxy corn. One of the essential nutrients required by waxy corn is potassium. Potassium can be obtained from inorganic fertilizers such as KCl. Meanwhile, rice husk charcoal functions as a soil ameliorant. The aims of this study were 1) To analyze the response of growth and yield of waxy corn to potassium fertilizer application, 2) To analyze the response of growth and yield of waxy corn to rice husk charcoal application, 3) To analyze the interaction of potassium fertilizer and rice husk charcoal on the growth and yield of waxy corn. The research was conducted from July to September 2025 in Mrawan Village Land, Mayang District, Jember Regency, East Java. The experiment used a Randomized Block Design (RBD) Factorial 3x3. The first factor was potassium fertilizer dose: 0 g/plot/application, 150 g/plot/application, and 240 g/plot/application with two applications. The total doses were 0 g/plot for K0, 300 g/plot for K1, and 480 g/plot for K2. The second factor was rice husk charcoal dose: 0 g/plot, 700 g/plot, and 800 g/plot. The research data were tested using ANOVA, and then the results were further tested with DMRT at a level of 5% or 1%. The results showed that the single factor of potassium fertilizer had a significant effect on plant height at 35 DAP and ear length and a very significant effect on total soluble solids (TSS). The interaction of potassium fertilizer and rice husk charcoal had a significant effect on ear diameter and a very significant effect on fresh weight of 5 samples (kg). The single factor of rice husk charcoal had no significant effect on all observed variables. The highest plant height was obtained at K2 (240 g/plot/application), with a mean value of 32.00 cm. The highest fresh weight of 5 samples was obtained numerically by K2S2 at 2.01 kg, but based on the DMRT 1% test it was not significantly different from other treatments. The highest ear diameter was obtained numerically in K1S1 at 62.11 mm.

Keywords: *waxy corn , potassium, rice husk charcoal*