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SESSÃO DE PÓSTERES

RESUMOS



**Reunião de Primavera
SPPF**

"EFFECT OF SOIL CONDITIONERS AND NITROGEN FERTILIZATION IN CORN'S ABOVEGROUND BIOMASS AND LEAVES GREEN COLOR INTENSITY."

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RESUMO

Every crop needs a well-nourished soil and balanced nutrition to have a good development. Nitrogen (N) balance is essential for plant development, and it depends on soil physical, chemical and biological properties. Some soil conditioners may have a relevant role in soil available N. The present work intends to evaluate the effect of soil conditioners such as biochar, zeolites and mineral fertilizers on the performance of plants through the determination of aboveground biomass and green color intensity of plant leaves in field and pot experiments. The field experiment was arranged as a factorial design with three soil conditioners (zeolites, biochar and mineral fertilizer only) and four N rates (0, 50, 100, 200 kg N ha⁻¹). The pot experiment was also arranged in a similar factorial design with only two rates of N. Plant health during the growing season was assessed by the Normalized Difference Vegetation Index (NDVI) determined by using the FIELDSCOUT® CM1000 meter. Aboveground biomass was weighed at the end of the growing season after it had been oven-dried at 70 °C. NDVI did not discriminate between treatments, with the mean values ranging from 0.80 to 0.85. From the field and pot experiments increased values of biomass yield were recorded to the higher N rates. Comparing soil conditioners zeolites produced the higher results.

Keywords: Biochar; Dry matter yield; Normalized difference vegetation index; *Zea mays*; Zeolites.