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YIELD RESPONSE OF WHEAT AND CHANGES OF MICROBIAL ACTIVITIES IN INDIGENOUS *Azotobacter chroococcum* INOCULATED SOILS WITH DIFFERENT PLANT RESIDUE APPLICATION

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The objective of this study was to determine yield response of spring wheat in indigenous *Azotobacter chroococcum* inoculated soils with different plant residue applications, to compare change of microbiological properties such as Basal Soil Respiration (BSR) and Microbial biomass (C_{mic}) in *A.chroococcum* inoculated soils with tobacco waste, rice husk, soybean waste and wheat waste applications, and to explore the best plant residue inoculated with *A.chroococcum* strain into the soil under greenhouse conditions. The grain and straw yield increased in all treatments and maximum increase was obtained from *A.chroococcum* inoculation with tobacco waste. The inoculation of *A.chroococcum* and plant residues into the soil caused different responses of soil microbiological properties. Generally, stimulatory effects of *A.chroococcum* with plant residues on C_{mic} and BSR in the soil were observed. The inoculation of *A.chroococcum* with wheat residue and tobacco waste caused significant increases in BSR and C_{mic} in soil statistically.

Keywords: soil, *A.chroococcum*, wheat yield, soil microbial activity.