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摘要： 采用无肥、常规肥、控释尿素和控释复合肥4种肥料处理，于大豆播种前和成熟期对大豆根际土壤的细菌、真菌、放线菌采用平板计数法进行测定；并对大豆成熟期根际土壤微生物数量变化、土壤养分含量变化及大豆农艺性状及产量相关因素进行分析。结果表明：与无肥和常规肥比较，控释尿素和控释复合肥可明显增加土壤中细菌、真菌及放线菌数目，并且控释复合肥处理的细菌数目、土壤养分含量等项目优于控释尿素处理；在大豆农艺性状及产量相关因素方面，控释尿素及控释复合肥未表现出显著优势。与常规肥相比，施用控释肥可以增加土壤中微生物数量、提高供肥能力，从而提高肥料利用率，减少化肥对环境的污染。

Abstract: The objective of current study was to investigate the effects of controlled-release fertilizer treatments on rhizosphere soil microorganisms,soil fertility and agronomic characters of soybean.Four fertilizer treatments,including no fertilizer(CK),conventional fertilizer(CF),controlled-release urea(CRU) and controlled-release compound fertilizer(CRF)were adopted.The numbers of bacteria,fungi,actinomycetes of rhizosphere soil at pre-sowing and maturity were determined through colony counting method;the change of rhizosphere soil microorganisms,soil nutrient content,soybean agronomic characters as well as yield components were investigated.Compared with CK and CF,the numbers of bacteria,fungi,actinomycetes as well as soil fertility were obviously increased under CRU and CRF.The effect of CRF was better than CRU in terms of soil bacteria number and soil fertility.CRU and CRF did not show significant advantage for agronomic characters and yield components of soybean.Compared with conventional fertilizer,controlled-release fertilizer could increase the numbers of soil microoganisms,improve soil fertility and fertilizer efficiency,hence reduce fertilizer pollution on the environment.

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