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研究报告

铜、锌污染对油菜生长和土壤酶活性的影响

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摘要 通过盆栽试验，研究了Cu、Zn污染对油菜幼苗生长和土壤酶活性的影响. 结果表明:Cu、Zn污染对水稻土中土壤酶活性的影响表现不同，Cu对土壤脲酶活性的影响最为强烈，且对脲酶活性的抑制能力强于Zn;Zn对过氧化氢酶活性的影响最为强烈. Cu对油菜生长的毒害及对油菜干质量的影响程度也高于Zn. Cu、Zn主要通过抑制根的生长及其物质积累来抑制油菜幼苗生长. 因子分析发现，根干质量较其他生长指标对Cu、Zn更敏感，可作为Cu、Zn污染检测指标.

关键词 Cu Zn 油菜 根干质量 土壤酶

分类号

Impact of Cu and Zn pollution on rape growth and soil enzyme activity.

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Abstract

A pot experiment was conducted to study the impact of Cu and Zn pollution on soil enzyme activities and rape seedlings growth. The results showed that Cu had a stronger inhibitory effect than Zn on soil urease activity, while Zn had more obvious impact on soil calatase activity. The damage on the growth and dry mass of rape was more serious under Cu than under Zn pollution. The inhibition of rape seedlings growth was mainly due to the inhibition of root growth and its material accumulation. Factor analysis indicated that root dry mass was more sensitive than other indices, which could be adopted to monitor soil Cu and Zn pollution.

Key words Cu Zn rape root dry mass soil enzyme

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