

研究报告

硫对石灰性土壤化学性质的影响

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摘要 通过连续两茬油菜盆栽试验, 分析了硫对土壤pH、电导率、交换性阳离子和水溶性阴离子等指标的影响。结果表明: 硫能显著降低土壤pH、增加土壤电导率; 施硫会使土壤交换性Na⁺和交换性K⁺含量升高, 并加剧土壤水溶性阴离子总量的累积; 施硫对交换性Ca²⁺和Mg²⁺含量影响较小, 也未能显著改变土壤阳离子交换量和土壤碱化度。与尿素相比, 硫包膜尿素对土壤pH和电导率的影响不显著, 但对交换性阳离子和水溶性阴离子影响较大; 与尿素处理相比, 施硫未表现出明显的增产效应; 施硫较多时, 油菜产量显著降低。

关键词 [硫](#) [石灰性土壤](#) [化学性质](#)

分类号

Effects of sulfur on chemical properties of calcareous soil

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Abstract

A pot trial with two continuous crops of rape was conducted to study the effects of sulfur on the chemical properties of calcareous soil. The results indicated that sulfur could decrease soil pH, while increase the electrical conductivity of soil solution markedly. Applying sulfur could enhance the contents of soil exchangeable Na⁺ and K⁺ and the accumulation of soil water-soluble anions, but had less effect on soil exchangeable Ca²⁺ and Mg²⁺, CEC, and alkalization degree. Comparing with urea, sulfur-coated urea (SCU) had less effect on soil pH and electrical conductivity, but markedly affected soil exchangeable cations and water-soluble anions. Sulfur application had no obvious yield-increasing effect, and higher application rate of sulfur could decrease the rape yield significantly.

Key words [sulfur](#) [calcareous soil](#) [chemical property](#)

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