

玉米秸秆施用措施对土壤肥力及烤烟产质量的影响

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摘要:为比较碳化处理与配施石灰两种措施对玉米秸秆在提高土壤综合肥力和改善烤烟产质量方面的作用,通过田间试验研究了玉米秸秆不同施用措施对烟田土壤养分含量、团聚体数量、综合肥力以及烤烟产质量的影响。结果表明:在常规施肥条件下,①配施玉米秸秆可提高土壤有机质和速效钾的含量,提升整治烟田土壤的综合肥力并改善烤烟评吸品质;②玉米秸秆配施石灰后在一定程度上可消除玉米秸秆对土壤的酸化作用,促进土壤中大团聚体的形成,提升土壤综合肥力,但不利于提高烤烟产量和烤烟化学成分的协调性;③碳化玉米秸秆配施石灰后可提升烟田土壤综合肥力,提高烤烟产量并改善烤烟化学成分的协调性。因此,整治烟田可通过长期配施碳化玉米秸秆与石灰,逐步提高土壤综合肥力,改善烟叶质量。

关键词:玉米秸秆;碳化玉米秸秆;石灰;烤烟;土壤综合肥力

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Effects of applying corn stalks on soil fertility, crop yield and quality of flue-cured tobacco

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Abstract: For comparing the effects of carbonization and liming of corn stalks on the promotion of soil fertility, yield and quality of flue-cured tobacco, field experiments were carried out to investigate the influences of different application methods on nutrient content, aggregate quantity, integrated fertility of soil, and consequently the yield and quality of flue-cured tobacco. The results showed that: under conventional fertilization condition, 1) The application of corn stalks increased soil organic matter and available potassium contents and improved the integrated soil fertility of renovated tobacco field and the sensory quality of flue-cured tobacco. 2) The application of corn stalks combined with liming reduced the acidification effect caused by corn stalks, and promoted the formation of macro water-stable aggregate in soil and integrated soil fertility. However, corn stalks combined with liming were not beneficial to yield promotion and coordination of

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