

资源环境 生物药物 生物质转化

猪粪发酵沼液对油菜(*Brassica chinensis* L.)品质的影响

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摘要:

为了研究猪粪发酵沼液在保护地油菜上施用对其品质的影响, 设置了“高浓度沼液”(T1)及“低浓度沼液+化肥”(T2)两种处理, 通过采集油菜样品, 测试包括VC、总糖、粗蛋白、可溶性固形物、铜、锌、硝酸盐和亚硝酸盐等多项品质指标, 研究沼液灌溉对油菜品质的影响。结果表明, 施用低稀释倍数沼液(T1)提高了油菜的VC、总糖、粗蛋白和可溶性固形物含量分别达310%、11%、28%和20%, 但硝酸盐和锌的含量较对照增高35%和37%, 且检出亚硝酸盐。“低浓度沼液+化肥”(T2)处理的油菜除VC含量提高外, 总糖、粗蛋白和可溶性固形物含量分别较对照下降6.7%、14%和13%, 但是硝酸盐含量降低50%, 且未检出亚硝酸盐。该结果表明采取“低浓度沼液+化肥”方式在叶菜类蔬菜上利用猪粪发酵沼液更能保障食品安全。

关键词: 沼液; 油菜; 品质

Effect of Biogas Slurry from Swine Farms on Cole Quality

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Abstract:

To determine the effect of applying biogas slurry from swine farms on cole quality in protected cultivation, 2 treatments “high concentration slurry” (T1), and “low concentration slurry plus fertilizer” (T2) and a control were set to study the effects of irrigating biogas slurry on cole quality. VC, total sugar, crude protein, soluble solid, total copper, total zinc, nitrate and nitrite of cole were tested. Results showed that when treated with concentration slurry, VC, total sugar, crude protein and soluble solid contents of cole increased 310%, 11%, 28% and 20%, respectively, while the contents of nitrate and zinc were up 35% and 37% than the control and nitrite was detectable. For T2 treatment, the total sugar, crude protein and soluble solid contents of cole decreased 6.7%, 14% and 13%, except the VC content was increased. And the nitrate content was 50% down and nitrite was undetectable. So “low concentration slurry plus fertilizer” was suitable for application of swine manure slurry in cole cultivation in terms of food safety.

Keywords: biogas slurry cole quality

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