

植物生产层

柱花草硼、钼微肥施用效果的研究

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摘要:

在热带地区土壤中硼、钼微量元素缺乏较为普遍。采用田间试验的方法, 针对柱花草(*Stylosanthes guianensis*)喷施硼、钼微肥效果进行研究。结果表明, 在土壤缺硼、钼的情况下, 适量喷施钼、硼肥均能增加柱花草的产量。其中喷施钼增产效果较明显, 其次为硼肥。与对照相比较, 喷施钼肥和硼肥柱花草产量分别增加了2 475和973 kg/hm², 增产率为16.4%和6.0%。适量喷施硼和钼能提高柱花草蛋白质、磷、钾含量, 能增加柱花草有效根瘤个数, 增强柱花草根系活力, 其中喷施钼肥处理柱花草有效根瘤个数增加较明显, 根系被氧化的α萘胺量的含量最高。适量喷施硼能提高柱花草粗灰分含量。

关键词: 硼 钼 柱花草

The effect of Molybdenum and Boron fertilizer on *Stylosanthes guianensis*

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Abstract:

The soil in the tropical region was generally short of Molybdenum and Boron, therefore, rational application of Molybdenum and Boron is important to increase the yield of forage production in the tropical regions. A field trial was conducted to determine the effects of Boron and Molybdenum on *Stylosanthes guianensis* by spraying way. This study showed that the application of Boron and Molybdenum with right amount increased the forage yield of *S. guianensis* when the soil was lack of Boron and molybdenum, and Molybdenum performed better than Boron, indicating that application of Molybdenum and Boron increased the forage by 2 475 kg/ha and 973 kg/ha with 16.4% and 6.0% increase rates, respectively. The spraying Boron and Molybdenum fertilizers increased the protein, phosphorus and potassium content of *S. guianensis* forage, and also increased the effective root nodules and the root activity of *S. guianensis*. Compared to Boron, *S. guianensis* treated by molybdenum showed the more effective root nodules and the higher oxidated α naphthylamines content in root. This study also indicated that application of right amount boron increased the crude ash content of *S. guianensis*.

Keywords: Boron; Molybdenum; *Stylosanthes guianensis*

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