

氮肥对菊芋生物量、热值和灰分含量的影响

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Effects of nitrogen fertilization on biomass, caloric value and ash content of Helianthus tuberosus L.

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摘要 探讨氮肥对菊芋生物量、热值和灰分含量的影响, 为菊芋氮肥管理提供理论参考。于2010年在内蒙古锡林河流域利用弃耕地进行菊芋种植, 设置0、2.5、5、7.5、10 g/m² 5个施氮水平, 对不同施氮水平条件下菊芋的生物量、热值和灰分进行测定。结果表明: 氮肥施入能够提高菊芋生物量、能量积累量和热值, 最佳施氮量5~7.5 g/m²; 各器官热值顺序为根系>茎秆>块茎>叶片; 能量积累量顺序为块茎>茎秆>叶片>根系; 灰分含量顺序为叶片>茎秆>根系>块茎。

关键词: 菊芋 热值 能量 灰分 氮肥

Abstract: In this paper, the effects of nitrogen fertilization on biomass, caloric value and ash content of Helianthus tuberosus L. was studied. The experiment was carried out in the abandoned land in Xilin River Basin of Inner Mongolia in 2010 with 5 nitrogen treatments, 0, 2.5, 5, 7.5 and 10 g/m². The caloric values, ash contents and dry biomass of leaves, stems, tubers and roots were measured after the harvest. The results show the biomass, energy accumulation amount and caloric value are improved by the use of nitrogen fertilizer, and the best N treatment is 5–7.5 g/m². The caloric values are in order of root>stem>tuber>leaf, the energy accumulation amounts are tuber>stem>leaf>root, and the ash contents are leaf>stem>root>tuber.

Keywords: Helianthus tuberosus L. caloric value energy ash nitrogen fertilizer

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