

植物生产层

MT 1象草新品系与Mott矮象草形态特征及产量性状的比较

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摘要:

于2007-2009年分别在每年的营养生长期和生殖生长期, 对MT 1象草新品系(*Pennisetum purpureum* cv.MT 1)和Mott象草(*P.purpureum* cv.Mott)的形态特征进行了比较, 并对MT 1象草新品系和Mott象草的各构件生物量、株丛产量进行了分析比较。结果表明, MT 1株高和丛径极显著高于Mott( $P<0.01$ ); Mott分蘖数高于MT 1; MT 1叶生物量(营养生长期)、枯叶生物量、茎秆生物量、花序生物量和单株生物量均极显著高于Mott; Mott叶茎比极显著高于MT 1。MT 1株丛产量高于Mott, 在营养生长期, MT 1株丛产量是Mott的1.42~1.84倍; 在生殖生长期, MT 1株丛产量是Mott的1.07~1.87倍。MT 1和Mott象草的年生物产量分别为31 246.50~48 838.60和18 201.70~36 306.60 kg·hm<sup>-2</sup>。

关键词: MT 1象草 Mott象草 形态特征 构件生物量 株丛产量

Comparison of morphological and productive characteristics between MT 1 elephant grass and Mott elephant grass

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Abstract:

Mott elephant grass (*Pennisetum purpureum* cv. Mott) is a kind of valuable forage in south China. In order to evaluate productivity of MT 1 elephant grass (*P. purpureum* cv. MT 1), bred from Mott population, comparative analysis between MT 1 elephant grass and Mott elephant grass on morphological characters, modular and bunch biomass during vegetative and reproductive growth periods were conducted from 2007 to 2009. The results indicated that the plant height and clump diameter of MT 1 were significantly higher than those of Mott ( $P<0.01$ ), and the tiller number of Mott was a little more than that of MT 1. The leaf biomass (in vegetative period), dead leaf biomass, culm biomass, inflorescence biomass and ramet biomass of MT 1 were significantly higher than those of Mott ( $P<0.01$ ). However, the leaf to culm ratio of Mott was significantly higher than that of MT 1 ( $P<0.01$ ). The bunch biomass of MT 1 in vegetative and reproductive growth periods, were 1.42-1.84 times and 1.07-1.87 times of Mott, respectively. The annual biomass of MT 1 ranged from 31 246.50 to 48 838.60 kg·ha<sup>-1</sup>, while that of Mott just ranged from 18 201.70 to 36 306.60 kg·ha<sup>-1</sup>. In summary, the productivity of MT 1 was better than that of Mott according to the outstanding biomass yield.

Keywords: MT 1 elephant grass Mott elephant grass morphological characteristics modular biomass bunch biomass

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