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植物生产层

松嫩平原星星草果后营养期无性系结构及其生长分析

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摘要：

针对松嫩平原自然条件下星星草(Puccinellia tenuiflora)单优群落独立株丛，采用随机挖掘整个分蘖丛的取样方法，对星星草果后营养期无性系结构及其生长规律进行了定量分析。结果表明，星星草无性系总构件数量为(49.07±29.74)个，分蘖株和分蘖苗分别占53.3%和46.7%；总生物量为(2.54±1.57)g，分蘖株和分蘖苗分别占90.7%和9.3%。随丛径的增加，分蘖株数量、分蘖苗数量、分蘖株生物量分别呈直线增加，总构件数量和总生物量呈幂函数增加，分蘖苗生物量呈对数函数增加；分蘖株生物量、总生物量分别与分蘖株数量和总构件数量呈直线函数关系，分蘖苗生物量与分蘖苗数量呈幂函数关系；其相关性均达到了极显著水平(P<0.01)。

关键词： 星星草 分蘖株 分蘖苗 无性系构件 生长分析

Structures and growth analysis of Puccinellia tenuiflora clone at the vegetative stage after fruiting in the Songnen Plains of China

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Abstract:

Using a random sampling method, an entire tiller tuft was dug out of the soil at the vegetative stage after fruiting in a single dominant community, and the module structures and growth pattern of Puccinellia tenuiflora clones were quantitatively analyzed in the natural meadow in the Songnen Plains of China. The results showed that the total number of modules was 49.07±29.74, in which the jointing tillers was 53.3% and young tillers was 46.7%. The total biomass of clone was 2.54±1.57 g, in which the jointing and the young tillers were 90.7% and 9.3%, respectively. With increase of tuft diameters, the number of jointing tillers and young tillers, the biomass of jointing tiller were all in a linear increase, while the total number of modules and the total biomass of clone were both increased by power function; and the biomass of young tillers was in a logarithmic function increase. In addition, the biomass of jointing tillers had a linear relationship with the number of jointing tillers, so was the total biomass of clone and the total number of modules. The relationship between the biomass and the number of young tillers was a power function. These correlation coefficients were all very significant (P<0.01) each other.

Keywords: Puccinellia tenuiflora jointing tillers young tillers clone module growth analysis

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