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X. H. Luo
Fujian Academy of Agricultural Science, China

Y. S. Lin
Fujian Academy of Agricultural Science, China

Z. Y. Ying
Fujian Academy of Agricultural Science, China

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The XXI International Grassland Congress / VIII International Rangeland Congress took place in Hohhot, China from June 29 through July 5, 2008.

Proceedings edited by Organizing Committee of 2008 IGC/IRC Conference

Published by Guangdong People's Publishing House

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Study on the adaptability of *Brachiaria spp.* in subtropical region of Fujian

X . H . Luo , Y . S . Lin , Z . Y . Ying

Institute of Agricultural Ecology , Fujian Academy of Agricultural Science , Fujian Engineering and Technology Research Center for Hilly Prataculture , Fuzhou 350013 , Fujian , China .

Key words : adaptability ,*Brachiaria spp.* , subtropical region

Introduction *Brachiaria spp.* is an important perennial tropical forage in hilly pasture and is widely used in preventing water and soil erosion (Bai et al . , 2001) . Field experiments were conducted in Fuzhou to compare the adaptability of two hybrid varieties , Multao1 (*Brichiaria ruziziensis* × *B. brizantha* CIAT 36061) and Multao 2 (*Brichiaria ruziziensis* × *B. decumbens* CIAT 36087) , with Reyan 3 (*B. decumbens*) as the control .

Materials and methods Three varieties of *Brachiaria spp.* were sown in experiment fields in Fuzhou with 4 replicates . Growing dates were observed in the first replicate . The second , third and fourth replicates cutted with the stubble height of 5cm when their canopy heights were above 40cm~50cm .

Results The flowering time of Mulato1 and Mulato2 was about 90 days later than Reyan3 , but the turning-green time was about 25 days earlier than Reyan3 (Table 1) . Hybrid varieties (Mulato1 and Mulato2) produced dry matter yield of 12.5~29.1 t/ha per year . Mulato1 had the highest DM yield of 29.1 t/ha and 24.9 t/ha in 2005 and 2006 respectively , and significantly higher than Reyan3 . The yield of Mulato2 was higher than Reyan3 in 2006 , although was less than Reyan3 in 2005 (Figure 1) .

Table 1 Growing dates of tested hybrid varieties of *Brachiaria spp.*

Variety	Wither stage	Turning-stage	Tiller stage	Jointing stage	Heading stage	Flowering stage	Ripening stage
Mulato1	Dec 22 2005	Feb 13 2006	Mar 27 2006	May 20 2006	Jul 7 2006	Aug 31 2006	Oct 2 2006
Mulato2	Dec 22 2005	Feb 13 2006	Mar 27 2006	Jun 15 2006	Jul 17 2006	Aug 31 2006	Oct 8 2006
Reyan3	Dec 22 2005	Mar 10 2006	Apr 25 2006	May 10 2006	May 25 2006	May 30 2006	Jul 20 2006

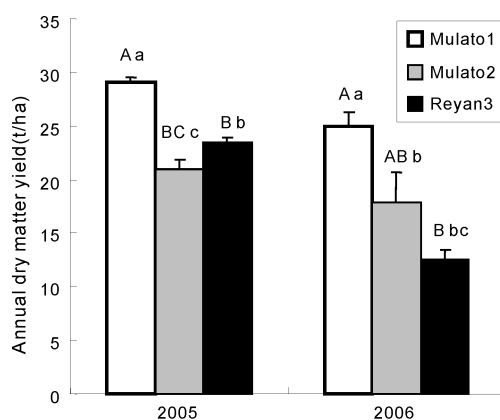


Figure 1 Dry matter yields of hybrid Signal grass varieties .

Conclusions It is concluded that two varieties of *Brachiaria spp.* can grow normally in Fujian subtropical area . Mulato1 as a promising variety has a good performance with high growth height and yield , strong tiller ability , early turning-green and later flowering .

Reference

Bai CJ , Liu GD (2001) The Dynamic Study on Nutrition and Feeding Value of *Brachiaria spp.* [J] . *ACTA AGRESTIA SINICA* , 9(2) : 100-116 .