A Study on the Seed Production Technology of Kikuyu Grass

Chongyi Kuang
Yunnan Beef Cattle and Pasture Research Center, China

Shiming Xue
Yunnan Beef Cattle and Pasture Research Center, China

Xiping Yuan
Yunnan Beef Cattle and Pasture Research Center, China

Chi Xu
Yunnan Beef Cattle and Pasture Research Center, China

Bizhi Huang
Yunnan Beef Cattle and Pasture Research Center, China

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

A study on the seed production technology of Kikuyu Grass*

Kuang Chong-yi[1], *Xue Shi-ming*[1], *Yuan Xi-ping*, *Xu Chi*[1], *Huang Bi-zhi*[1*]
Yunnan Beef Cattle And Pasture Research Center, Kunming 650212, China

Key words: Kikuyu grass, Soil type, Stubble height remaining, Seed quantity, Rate of germination

Introduction In China, kikuyu grass (*Pennisetum clandestinum*) was successfully introduced in the middle 80s last century by Yunnan Beef Cattle and Pasture Research Center during a Sino-Australia technology co-operation program. Kikuyu has performed very well for more than twenty years in the past. Thus, requirement for the seeds keeps going up year after year. The seeds of the species is usually enclosed in its leaf sheath, adding to the difficulty of seed harvesting and threshing, which makes the seed production of the species even more difficult, restricting greatly the large scale extension and application.

Materials and methods

1. Materials: Lawn mower, tape measure, sieves, electronic scale, Boxun Apparatus (of SPX-250I-G model, available for temperature, light and ventilation control, with the temperature for seed germination controlled between 25～30℃).

2. Methods: Factor A stands for different soil types as A_1-the soil of uncultivated, A_2-the soil of cultivated land, A_3-the soil with high organic material contained and A_4-the soil of grazing land. Factor B stands for the different remaining stubble height as B_1 of 0.05m, B_2 of 0.1m and B_3 of 0.15m.

Results

1. Results of Seed Yield and Rate of Germination from Factor A Treatment(Figure 1)
2. Results of Seed Yield from Factor B Treatment (Figure 2)

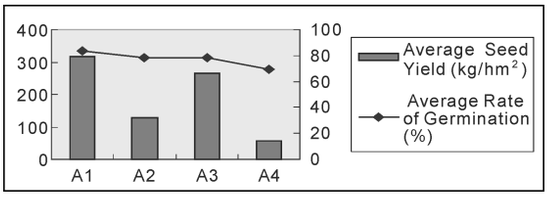

Figure 1 *Seed Yield and Rate of Germination from Factor A Treatment.*

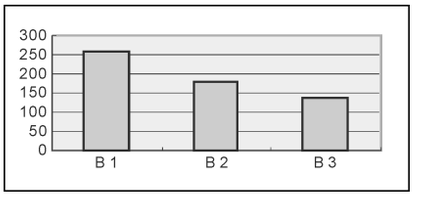

Figure 2 *Seed Yield Resulted from Factor B Treatment.*

Conclusions Among all the soil types, the uncultivated soil type produced the highest seed yield of 318 kg/hm^2. It was also concluded that, among all the treatments of stubble height, the 0.05m height produced the highest seed yield of 257 kg/hm^2.

There was no significant difference in 1000-seed weight in spite of soil fertility or stubble height. However, there was a significant difference in seed germination rate caused by different soil fertility in that the seed germination rate of the uncultivated soil type was highest, 83.56%.

To sum up the above, it could be concluded that the two factors the uncultivated soil type and 0.05m stubble height of performed the best both in terms of seed yield and seed germination rate for Kikuyu grass.