

# The mineral nutrients content and the organic manure quality appraisal for the *Stylosanthes* green manure

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## Introduction

Stylo (*Stylosanthes spp.*) is a leguminous crop planted widely in the world tropics. In the past the stylo was commonly used as pasture with high quality, and was less used as a green manure. However, stylo is recently used more as a green manure in tropical plantations. As there is little relevant research on the organic manure quality for stylo, the purpose of this research was to evaluate the quality of stylo green manure. Selection of stylo green manure with the highest quality was based on the analysis of nutrients and organic matter content in stylo.

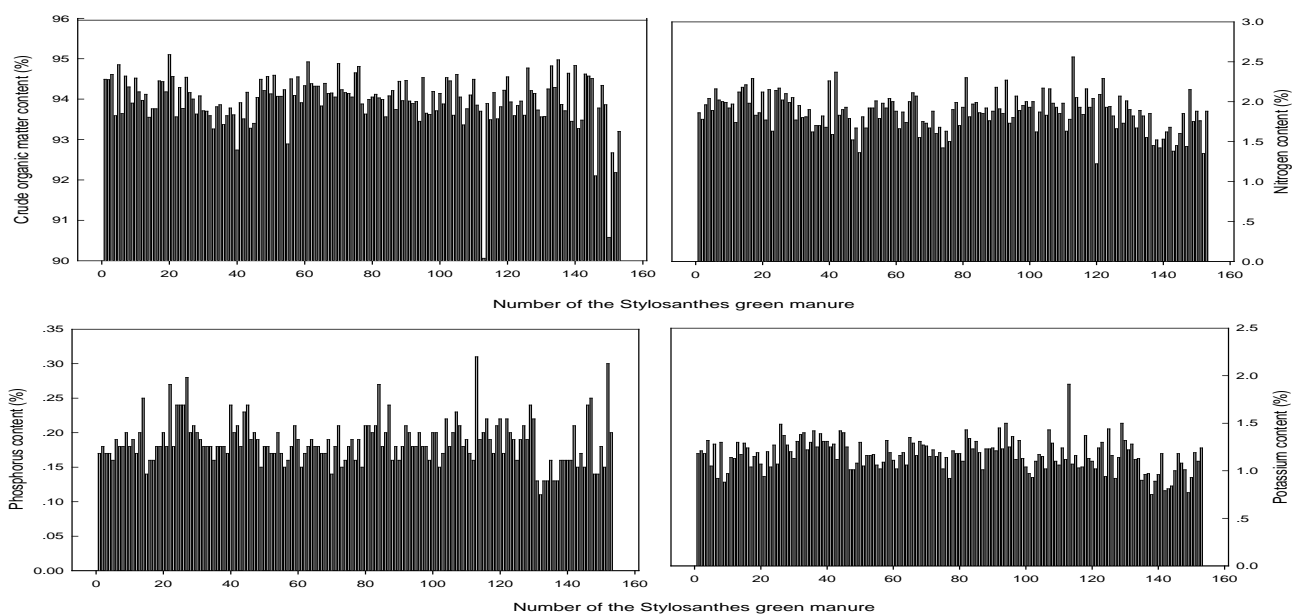
## Materials and method

Stylo used in this research was from the material conserved in the Chinese Academy of Tropical Agricultural Sciences, Danzhou, Hainan Province in China. Of the 153 selections, 134 were from *S. guianensis*, 7 *S. scabra*, 4 *S. seabrana*, 2 *S. hamata*, 2 *S. hippocampoides*, and 1 each of *S. macrocephala* and *S. humilis*. The nutrients and the crude organic matter

content these selections was analyzed according to the method of Lu (2000), and the appraisal for the stylo organic manure quality was conducted according to the method of the China Agricultural Technology Popularization and Service Center (1999).

## Results

The results indicated that the stylo crude organic matter content ranged from 90.1% to 95.1% (average of 94.0%), nitrogen content ranged from 1.22% to 2.56% (average of 1.87%), phosphorus content ranged from 0.11% to 0.31% (average of 0.19%), potassium content ranged from 0.75% to 1.91% (average of 1.17% - Fig. 1). The appraisal result based on the crude organic matter and mineral nutrients content indicated that 94.8% (145 of the 153) could be categorized into the second grade organic manure (that of high quality), and only 5.2%, including *S. guianensis* cv. CPI18750A, *S. guianensis* TPRC90047, *S. guianensis* TPRC E7, *S. scabra*. *Seca* 33260, *S. scabra*. *Seca* 93116, 1 of the *S. seabrana*, 1 of the *S. capitata* and *S. macrocephala* was categorized into the third grade organic manure.



**Figure 1.** The crude organic matter and the mineral nutrients content of the *Stylosanthes* green manure.

## **Conclusions**

Most of the stylo could be used as organic manure of high quality due to the high content of the mineral nutrients and the crude organic matter.

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