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Effect of phenological stage on biomass production and chemical composition of *Brachiaria ruziziensis* for ruminant feeding

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Aim

The study of the effect of phenological stage (bolting, flowering and seed set) on biomass production and chemical composition of *Brachiaria ruziziensis* for ruminant feeding was conducted at the University of Dschang teaching and research farm in 2008.

Materials & Methods

A total of 24 plots of 8 m² (4 m × 2 m) of *Brachiaria ruziziensis* were used at each phenological stage (bolting, flowering and seed set). The evaluation of the plant biomass was done on each plot. A representative sample of 1 kg of plants, taken during the measurement of biomass was dried at 60°C to evaluate the chemical composition of the plant.

Results

The results of this study showed that the biomass of *Brachiaria ruziziensis* increased significantly ($P < 0.05$) with phenological stage. The phenological stage has variably affected the chemical composition of the *Brachiaria ruziziensis*. The dry matter and fibre content of *Brachiaria ruziziensis* increased at the phenological stage whilst the concentration of crude protein, digestibility of organic matter and metabolizable energy of *Brachiaria ruziziensis* decreased significantly ($P < 0.05$). However, the concentration of carbohydrates in the plant increased significantly ($P < 0.05$) with the phenological stage.

Conclusion

This study shows that harvesting/feeding at the flowering stage may be recommended for this forage crop because it combines both high biomass and forage with good nutritional value.

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