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## Introduction

95% LI can be considered the optimum time for interrupting regrowth

However, the severity of defoliation must be adjusted

the study of morphogenesis may help to define management goals

Objective → to evaluate the morphogenetic and structural characteristics of *Andropogon gayanus* cv. Planaltina cut at three different heights

## Materials and methods

- Experiment: Animal Science Department, Universidade Federal de Viçosa, Brazil
- Period: November 2007 to November 2008
- Treatments: three cutting heights (20, 27 and 34 cm)

↳ when reaching 95 % light interception during regrowth

- Experimental design: completely randomized block with three replicates
- Experimental units: plots of 12 m<sup>2</sup>
- Monitoring and evaluations:



- Seasons:
  - ↳ late spring (November and December);
  - ↳ summer (January, February and March);
  - ↳ autumn (April, May and June)
- ANOVA using the MIXED procedure of the SAS statistical package
  - ↳ means: estimated by LSMEANS; compared using Student's t-test (alpha = 5%)

## Results and discussion

Table - Morphogenetic and structural characteristics of *Andropogon gayanus* cut at different heights when reaching 95 % light interception during regrowth

Time of year	Cutting height (cm)			SEM
	20	27	34	
<b>Final leaf length (cm leaf<sup>-1</sup>)</b>				
Late spring	16.8 Ca	18.2 Ba	19.8 Aa	0.43
Summer	16.2 Ba	17.7 Aa	17.8 Ab	0.58
Autumn	13.7 Cb	16.3 Ab	15.5 Bc	0.34
<b>Phyllochron (days leaf<sup>-1</sup>)</b>				
Late spring	11.0 Bb	12.5 Aa	10.9 Bb	0.21
Summer	13.2 Aa	13.6 Aa	12.8 Aa	0.46
Autumn	10.7 Aa	7.5 Bb	6.1 Bc	0.80
<b>Number of living leaves (leaves tiller<sup>-1</sup>)</b>				
Late spring	3.13 Ba	3.36 Abc	3.76 Ac	0.105
Summer	2.98 Cb	3.66 Bb	4.34 Ab	0.110
Autumn	3.55 Cab	4.84 Ba	5.88 Aa	0.158
<b>Leaf lifespan (days leaf<sup>-1</sup>)</b>				
Late spring	34.5 Bb	41.9 Ab	40.7 Ab	0.47
Summer	39.4 Ba	49.6 Aa	55.4 Aa	1.87
Autumn	37.9 Aa	30.0 Bc	35.8 Ac	0.75

Means followed by the same lowercase letters within columns and uppercase letters within rows are not significantly different (P>0.05)  
SEM = standard error of the mean.

Besides this, greatest stem elongation rate (0.503 compared to 0.091 and 0.093 cm tiller<sup>-1</sup> day<sup>-1</sup> for late spring summer, respectively)

Flowering changes the patterns of growth and development of the plants

↳ In addition, greatest leaf senescence (0.564 compared to 0.508 and 0.417 cm tiller<sup>-1</sup> day<sup>-1</sup> for cuts to 27 and 34 cm, respectively)

Cutting heights of 20 cm were drastic enough to damage the canopy structure, causing increased decapitation and death of tillers

## Conclusions

A cutting height of 20 cm may be drastic for *Andropogon gayanus* cv. Planaltina subjected to management when the canopy reaches 95 % interception of incident light  
Under conditions of intermittent maintenance, defoliation of *Andropogon gayanus* cv. Planaltina should be interrupted when the stubble height is approximately 27 cm