



# XIII Congresso de ECOLOGIA

## III International Symposium of Ecology and Evolution

Múltiplas ecologias: evolução e diversidade

08 a 12 de outubro de 2017 • UFV - VIÇOSA | MG

### MOWING AS MANAGEMENT TOOL OF CERRADO INVASIVE GRASSES: RESPONSE OF THE SOIL SEED BANK IN CONSERVATION UNITS

Mariana Aragão de Macedo\*<sup>1</sup>, Danilo de Melo Rodrigues<sup>1</sup>, Maria Eduarda Moreira Salomon Camargo<sup>1</sup>, Niquele Nunes Almeida<sup>1</sup>, Juca Dorea de Castro Chaves<sup>1</sup>, Heloisa Sinatora Miranda<sup>1</sup>, Carolina Musso<sup>1</sup>

<sup>1</sup>Departamento de Ecologia, Instituto de Ciências Biológicas, Universidade de Brasília, 70910-900, Brasília, DF., \* [mari.aragao.biologia@gmail.com](mailto:mari.aragao.biologia@gmail.com)

Tema/Meio de apresentação: Ecologia de ecossistemas/Pôster

Invasive grasses are a threat to Cerrado since they can alter ecosystem functioning and reduce biodiversity. The soil seed bank is a potential source of regeneration in invaded areas and should be considered in management plans. The objective of this work was to quantify native and invasive species in the soil seed bank and assess its response to mowing and seasonality of the rains. The soil was sampled in areas invaded by African grasses in three conservation parks in the Federal District. In each park, one area was maintained as a control, and one was subjected to annual mowing at the dry season of 2015 and 2016. Samples were collected along the area, comprising points from the border until the interior (40m). The first sampling took place in 2015 (end of the dry season) and the second in 2016 (end of the rainy season). In a greenhouse, seedling emergence was monitored daily for six months. The native seedlings were classified as grasses and dicots, and the invasive were counted as *Hyparrhenea rufa* (Nees), *Melinis minutiflora* (P. Beauv.), *Andropogon gayanus* (Kunth). and *Urochloa decumbens* (Stapf). In 2015, native grasses and dicots were more homogeneous along the area (average of 194 seedlings / m<sup>2</sup> and 464 seedlings / m<sup>2</sup>, respectively) while invaders such as *A. gayanus* were concentrated at the borders (612 seedlings / m<sup>2</sup>). *M. minutiflora* presented the highest seedling density (2000 seedlings / m<sup>2</sup>). In 2016, soil seed bank density significantly decreased over 70%. This response was observed for all classes, both in the mowed and the control areas, probably due to the germination promoted by the rains. However, the mowed area presented a more pronounced decrease in the seed bank of invasive grasses. A possible effect of mowing as management tool should be confirmed in further measurements.

**Acknowledgements:** The authors thank CAPES for the project grant PAJT 88887.093793/2015-00. We also thank the technicians of the Universidade de Brasília and Pedro Sudbrack Oliveira.