



# 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

### SEED BANK DYNAMICS OF *ANDROPOGON GAYANUS* KUNTH IN BRAZILIAN SAVANNA (CERRADO)

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

<sup>1</sup>Departamento de Ecologia, Instituto de Ciências Biológicas, *Campus* Universitário Darcy Ribeiro, Universidade de Brasília, Brasília, Distrito Federal – CEP 70910-900, Brasil. Correspondence to \*nicknunes13@gmail.com

Ecosystem ecology/ Oral

Many African grasses that have been introduced in Cerrado (Brazilian Savanna) as forage have become invasive. That is the case of *Andropogon gayanus* Kunth, which is a highly pervasive grass that negatively impacts Cerrado areas. It disperses rapidly due to its great seed and biomass production. Therefore, understanding its soil seed bank formation may aid the elaboration of efficient management plans. This work aims to describe the longevity of *A. gayanus* seeds in the Cerrado soil seed bank. The study was carried out in an invaded area of the Reserva do Instituto Brasileiro de Geografia e Estatística. The seeds were harvested in July of 2015 and kept in laboratory until use. On the onset of the rainy season (October), a total of 60 bags, containing 100 fertile seeds each, were buried at the study site. Another group of fertile seeds was kept in the laboratory as a control. Monthly, five bags were retrieved from field. Then, seed viability was assessed for both field and control groups (Tetrazolium-Chloride solution, 1%). Before burying, the seeds presented 60% viability. At the end of the first month, field seeds viability reduced to 40%. From the fifth month until the twelfth, this viability stabilized at 2%. The control group did not present any significant alteration in seed viability throughout the year. Even though the viable seeds percentage in soil was low after 12 months, this value may be considered ecologically relevant, since *A. gayanus* produces many seeds. That is, some seedlings from the previous reproduction period may emerge along newly dispersed ones in the following growing period. We recommend that management to control *A. gayanus* by impairing its dispersion should be applied for at least two consecutive years to avoid new seedling establishment. These results agree with those reported for this species in the literature.

**Acknowledgements:** We gratefully acknowledge the project CAPES-PAJT 88887.093793/2015-00 for the financing and grants and the technicians of the Universidade de Brasília.