

Editorial

Wake up while there is still time: The Case of the Pampa

Despierta mientras aún hay tiempo: El caso de la Pampa

Vamos acordar enquanto ainda há tempo: O caso do Pampa



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The Campos or Pampa Biome is an ecological region that spans southern Brazil, northeastern Argentina, and all of Uruguay, covering a vast area of nearly half a million square kilometers. This region hosts enormous floral diversity, sustaining millions of domestic ruminants in various production systems, benefiting thousands of producers, and providing essential food for the population. Many of these species are of recognized forage importance due to their wide geographical distribution, productivity, and quality—for example, *Paspalum dilatatum*, *P. notatum* among grasses, and *Trifolium riograndense* and *Adesmia latifolia* among legumes. Other notable genera include *Paspalum*, *Axonopus*, *Andropogon*, *Panicum*, *Setaria*, *Digitaria*, *Schizachyrium*, *Bromus*, *Stipa*, *Desmodium*, *Adesmia*, *Trifolium*, *Arachis*, *Macroptilium*, *Aeschynomene*, and *Vicia*, which belong to grass and legume families, although other plant families also have species with good forage value.

Although the biome extends across three countries, this article will focus on the Campos Biome in Brazil (covering grassland areas in Paraná, Santa Catarina, and Rio Grande do Sul). Given its history, this region should be called the Southern Fields (*Campos Sulinos*), as it has suffered the most degradation and has received very little attention.

In Rio Grande do Sul, native grasslands within the Campos Biome support more than two-thirds of the state's livestock, highlighting their economic and social importance. Originally, these grasslands covered almost 70% of the state, but unfortunately today they occupy only around 30%⁽¹⁾. The main causes of this decline are annual crops (soy, rice, and corn), silviculture, temperate fruit farming, and the invasion of *Capim Annoni-2*.

Additionally, these shared landscapes have shaped a unique cultural figure common to all three countries: the *gaúcho*. Despite some differences, *gaúchos* share a deep love for nature, traditions, friendship, and simplicity. The disappearance of these grasslands will not only cause environmental and economic damage but will also lead to the erosion or even disappearance of this culture, which has been forged by fire and wind.



As previously mentioned, many species—such as those from the *Paspalum*, *Adesmia*, *Bromus*, and *Trifolium* genera—and their use could be studied and improved, as they have only undergone natural selection, and reintroduced into degraded areas, areas at risk of degradation, or areas where productivity needs to be increased.

However, all of this would be meaningless without seeds of these native species. Unfortunately, there is currently not a single cultivated variety of a native grassland species available for use—whether for pasture establishment, genetic improvement, or land restoration.

Therefore, despite claims that we need new techniques and more resources, the most urgent requirement today for preserving even part of this immense natural heritage is a public policy aimed at the conservation and rational use of our genetic resources. This is not just a financial issue; equally important is the educational aspect—the need to raise awareness of the importance of this resource.

In Brazil, there is already a conservationist movement advocating for the preservation of biomes such as the Amazon, the Cerrado, and the Atlantic Forest. Meanwhile, the Pampa Biome (or "Campos," as we traditionally call it) has been losing more than 100,000 hectares annually over recent decades, with little public outcry outside of academia. Unfortunately, the scientific community has not been effective in communicating the importance of this resource to the general public and policymakers. Additionally, some scientists still advocate for the use of burning as a "management technique," arguing that its effects are similar to grazing while ignoring its harmful impacts. Such claims only reinforce the neglect of conservation efforts instead of promoting sustainable practices.

After nearly half a century in my professional field, I am also struck by the lack of legume use in our pasture systems. There are, of course, exceptions, but the general trend is alarming in a world increasingly strained by resource scarcity, pollution, and climate change. It is even more concerning that the use of legumes is not taught or encouraged in our universities or professional agricultural activities. While legumes require more complex management than mineral nitrogen application, their benefits for the soil-plant-animal system and consumers are undeniable. How much longer will we continue to overlook this?

Finally, I do not want to end this article on a pessimistic note. Although I am officially retired, I continue to work with native species and believe that education and strong engagement with funding agencies, policymakers, and opinion leaders are the only ways to improve this situation. News reports frequently cover deforestation and fires in the Amazon and Cerrado, but there is rarely any coverage of the destruction of the Campos. On the contrary, livestock farming is now being blamed as one of the major contributors to global warming. That is a topic for another article, but for now, consider this a warning: if we remain silent, the consequences will be predictable.

We cannot give up—if we do, future generations will rightfully ask what we did to stop this. Will we need to build museums so that our grandchildren can see what our native pastures once were?

I don't recall who said it, but the following insight remains relevant: *"In Brazil, we are destroying forests to plant pastures, degrading a rich ecosystem in the North of the country. Meanwhile, in the South, we are destroying pastures to plant exotic forests."* Something is clearly wrong.

References

⁽¹⁾ MAPBIOMAS. Destaques do mapeamento anual de cobertura e uso da terra no Brasil entre 1985 a 2021: Coleção 7 [Internet]. 2022 [cited 2025 Feb 27]. Available from: https://brasil.mapbiomas.org/wp-content/uploads/sites/4/2023/11/MapBiomass_Colecao7_2022_10.10.pdf