

## **Lack of intraspecific variation in resistance to defoliation in a grass that evolved under light grazing pressure.**

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### **Abstract**

Grass species frequently show marked intraspecific variation in morphology and tolerance to defoliation. Remarkably, most of this evidence comes from grasslands with long evolutionary history of grazing. Here, we explore the intraspecific variation in grazing tolerance and morphometric traits associated with grazing avoidance of *Paspalum dilatatum* (Poir.), a grass from the Flooding Pampa (Argentina), where grazing is a novel disturbance in evolutionary time. We performed a clipping experiment in a greenhouse with two populations from sites with contrasting short term grazing regime: continuous grazing and 20 year-old grazing exclosure. The populations did not differ in their tolerance to clipping, and showed minor differences in the way clipping affected plant height, a trait associated with grazing avoidance. Our results indicate that there are exceptions to the generalized findings of high levels of intraspecific variation in grazing resistance among populations of grasses. These exceptions may be associated to evolutionary history of grazing.