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Growth and Root System Nutrition of *Brachiaria* Hybrids as Affected by Aluminum Toxicity.

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Most soils utilized for growing pastures in Brazil are acidic, low in fertility, and rich in toxic aluminum. Such conditions inhibit water and nutrient uptake by roots, causing limited forage yield, even in relatively tolerant species, such as some of the genus *Brachiaria*. Among the alternatives considered viable to overcome such restrictions, the development of genetically improved cultivars is one of the most promising, with special reference to *Brachiaria decumbens* x *B. ruziziensis* hybrids. The purpose of this study was to evaluate the response of contrasting *Brachiaria* hybrids exposed to different levels of toxic aluminum under controlled conditions. The experiment was conducted in a hydroponic system, with four aluminum levels and a control (no Al^{3+} and free pH). The results indicate that the studied hybrids show differential response when exposed to Al^{3+} relative to root length, fresh matter content and levels of Al, Fe and P. It was concluded that the levels of the treatments and the procedures employed to simulate toxicity were efficient for evaluating the effects on the studied hybrids. It was found genetic variability for Al tolerance among the hybrids, suggesting the genotypic selection under those conditions is viable.