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RESPONSE OF TRADITIONAL AND MODERN UPLAND RICE CULTIVARS TO DROUGHT

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In the last 30 years, the breeding strategy for upland rice in Brazil Central is basically based on direct selection for high yield, targeting the favorable savanna areas. When modern cultivars are grown in savanna areas subjected to multiple water stress the yield is generally lower than traditional cultivars. This study aimed to evaluate the response to drought for traditional and modern upland rice cultivars based on relative transpiration and fraction of available soil water. Two modern cultivars and one traditional cultivar were submitted to two water regimes, potential growth and water deficit, after the panicle differentiation. It was observed that modern upland rice cultivars had different response to drought than traditional cultivar. Modern cultivars, by maintaining the leaf turgor on the beginning of water stress, are better suited to environments that have short periods of dry spell. However, the traditional cultivar presented a reduction in the relative transpiration on the beginning of water deficit period, and can better adapt to environments considered unfavorable, which have longer periods of dry spell.