Summary

A trial was carried out in Teresina, Piauí, Brazil, to evaluate the most appropriate time to harvest *Andropogon gayanus* seeds. Local conditions comprised an Allic Red-Yellow Latosol, mean annual temperature of 24.7 ^{0}C, and mean annual rainfall of 1360 mm. Harvests were carried out at 18, 21, 24, 27, 30, 33, 36, and 39 days after heading (5-10 panicles/m^2). The experimental design used was randomized complete block, with four replicates, and a plot size of 12 m^2 (3 x 4 m), with rows spaced at 1-m intervals. Fifty-centimeter pieces of colms were harvested, oven dried for 5 days, and hand threshed. Seeds were cleaned and weighed. The highest seed production, at 400, 399, and 396 kg/ha, were observed 24, 27, and 30 days after heading. Total tiller numbers ranged from 164 at 18 days to 184 at 36 days. Reproductive tillers numbered from 69 (18 days) to 128 (39 days). The 1000-seed weight was similar across harvesting times, the lowest being 3.55 g at 21 days after heading and the highest, 3.83 g at 39 days.