

Summary

Cattle raising in the subtropical area of Tucuman, Argentina, is based on the direct use of forage produced in unirrigated areas, where summer rains are below the annual average of 700 mm and highly variable over time. Megathermic grasses are the main forage resource under these conditions. The present study aimed to evaluate the effect of cutting frequency on total dry matter (DM) production, and its distribution during the growth cycle of seven tropical grasses. The experiment was conducted in Piedrabuena (26° 44' S, 64° 39' W) and the cultivars used were *Panicum maximum* cvs. Gatton (GAT) and Green (GRE), *Setaria anceps* cv. Narok (SET), *Chloris gayana* cvs. Común

(GRC) and Tuc Oriental (TUC), and *Cenchrus ciliaris* cvs. Texas (TEX) and Biloela (BIL). Cutting frequency was at 4, 6, and 8 weeks (C1, C2, and C3, respectively) and was maintained during the 3 years of evaluation. Before each cutting, the phenological stage of the pastures (vegetative state, preflowering, flowering, and maturity) was recorded. Canopy height (nonextended leaf) was measured before cuttings at C1 and C3 during the first year. The growth cycle was divided into three periods—November-December (P1), January-February (P2), and March-April (P3)—to analyze the distribution of DM production. A split-plot randomized block experimental design was used, with four replications, in which the cultivars formed the main plot and cutting frequency the subplot. Results were analyzed statistically, using a 3 (years) x 7 (cultivars) x 3 (cutting frequency) factorial arrangement, and the Tukey test. Cutting frequency affected the DM production of these tropical grasses. The highest DM production was observed in C3, except for GRC, which differed, and TUC, which did not differ, between C1 and C3. For all cultivars and absolute values, C2 was the less productive cutting frequency. Rainfall amount and distribution had an important effect on DM production. The most stable grasses were BIL, GRE, and TEX, and the least stable were SET and GRC. Dry matter production was irregular during active growth. On average, 24% of the total DM was produced during P1, 41% during P2, and 35% during P3. Dry matter production by cultivar, in decreasing order, was as follows: BIL, TEX, TUC, GRE, GAT, SET, and GRC. Maximum height was observed in P2. Phenologically, the *Cenchrus* cultivars were the first to reach the reproductive state, followed by GRC and SET, and the latest was TUC.