Summary

The growth and quality of *Axonopus jesuiticus* (Araujo) Valls, submitted to various frequencies of cutting, were studied in two field trials conducted on eutrophic Cambic soil (Haplaquoll) at the Empresa de Pesquisa Agropecuária de Itajaí (EPAGRI), Brazil. High (application of NPK) and low (no fertilization) levels of soil fertility were considered. Initial growth (IG) curves were generated at 14-day intervals up to 112 days. Forage was analyzed for crude protein (CP) content and IVOMD. Complementary curves (CC) were also

generated by harvesting plots 28 days after the last cut for IG curves. An overall curve (OC) was obtained by adding the production values of the two previous curves. Data were analyzed by regression analysis. Average productivity on high-fertility soils (5.4 t/ha DM) was higher ($P < 0.05$) than that of low-fertility soils (4.3 t/ha DM). The best fit for production data in IG curves was linear for high-fertility soils and cubic for low-fertility soils. Best fits for forage quality data in IG curves were linear; however, CP and IVOMD decreased with forage age. The best fits for CC in high-fertility soils was quadratic and in low-fertility soils, lineal. From the practical viewpoint, forage cut at 42-day intervals allows high productivity of good-quality forage. If forage cut is deferred to 70-day intervals, high yield can be obtained.