# Summary

A study was carried out at the Clavellinas Experiment Station in Jalisco, Mexico, to evaluate the establishment, forage production, and persistence of six new species in tropical conditions (temperature, 20.5 °C; average annual rainfall, 800 mm). Soils were sandy and had neutral pH, intermediate fertility, and a very low organic matter content. Treatments were applied according to a randomized experiment design with three replications, and consisted of six grasses: buffel grass (*Cenchrus ciliaris* cv. Nueces), Guinea grass (*Panicum maximum* cv. Natzukase), Klein grass (*Panicum coloratum* cv. Verde), Klein-75 (*Panicum coloratum* cv. 75), Bermuda grass (*Cynodon dactylon* cv. Gigante), and Laurisa grass (*Pennisetum orientale* cv. Azul). Fertilization consisted of 50 kg N/ha per cutting and 40 kg P/ha per year. Irrigation was applied from November to June. Lots were cut 16 times over a 760-day period. Forage quality and production, the number of plants/m$^2$, plant height, and soil coverage were statistically significant ($P < 0.05$) for the six grasses, four seasons, and two moisture conditions (rainy and dry periods). The interaction between treatments and years, seasons, and conditions was not statistically significant ($P > 0.05$). Klein-75 grass showed superior establishment at 80 days, high forage quality, and persistence. Guinea grass cv. Natzukase had superior forage production. Several grasses performed better during the rainy season and during summer/autumn.