

Summary

Shoot extracts were prepared from forage grasses *Brachiaria humidicola*, *B. decumbens*, and *B. brizantha* cv. Marandu, at 10% concentration, to determine their effects on inhibiting germination and radicle elongation of the pasture weeds “desmódio” (*Desmodium adscendens*), “guanxuma” (*Sida rhombifolia*), and “assa-peixe” (*Vernonia polyanthes*). The pH, conductivity, and osmotic potential of each extract were determined. The effects of osmotic potential were estimated considering the osmotic potential of the shoot extracts and water, and the regression equation of *D. adscendens*, ranging from 0.0 to 0.4 MPa. Bioassays were carried out in BOD-type chambers; a constant temperature of 35 °C and a 12-hour photoperiod were used to study the effects of the extracts on weed germination, and a constant temperature of 35 °C and a 24-hour photoperiod to study their effects on radicle elongation. Neither extract pH nor cation concentration affected results. Forage grasses evidenced an allelopathic potential that varied depending on the host species and the parameter analyzed. The weed “assa-peixe” was less sensitive to the effect of the extracts. Radicle elongation was the best indicator to measure the inhibitory effects of shoot extracts.