



# Forage production and nutritional content of silage from three varieties of pearl millet (*Pennisetum glaucum*) harvested at two maturity stages

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## 1 ABSTRACT

The aim of this study was to evaluate the production and nutritive value of silage of three varieties of pearl millet (*Pennisetum glaucum*) harvested at two stages of maturity. The study was conducted in the semiarid region of Northern Mexico under temporary conditions with three varieties of pearl millet (ICMV-221, ICMV-7704 and HHBVC Tall). Four samples of forage for each variety were harvested at flowering and grain-filling stages. The production of dry matter *per* hectare was determined and the samples were ensiled in bags until the analyses for nutritional value (dry matter content, crude protein, soluble protein, available protein, fibre, digestibility, energy, non-structural carbohydrates and minerals) determined by the NIRS method (Near Infrared Reflectance Spectroscopy). The production of dry matter *per* hectare did not differ among the varieties ( $P < 0.05$ ). The content of crude protein was higher in flowering stage ( $P < 0.05$ ), meanwhile, the dry matter content and non-structural carbohydrates were higher in the grain-filling stage; but these variables were not affected by the variety ( $P > 0.05$ ). The content of fibre and minerals, digestibility and energy values did not differ between stage of harvest or among varieties ( $P > 0.05$ ). The study concluded that any of the varieties of pearl millet tested could be ensiled without reducing production or nutritional content in semi-arid conditions in northern Mexico.

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