Abstract

The present study was performed with the objective of assessing the effect of cutting frequency on herbage yield, botanical and morphological composition, leaf area per tiller and intercepted radiation in alfalfa (Medicago sativa L.) cv. San Miguelito. The study was carried out from August 2006 to August 2007 at the Colegio de Postgraduados research station, Montecillo, Estado de Mexico. The treatments consisted in four cutting frequencies, 3, 4, 5 and 6 wk in spring summer and 4, 5, 6 and 7 wk in fall-winter, distributed in a completely randomized block design with four replicates. Seasonal and annual herbage yield showed differences between cutting frequencies (P<0.05). The greatest total accumulated drymatter yield (34,454 kg DM ha-1) was recorded at the 6 and 7 wk cutting frequencies, showing a 31, 26, 23 and 20 % distribution for summer, spring, fall and winter, respectively. Leaf area per tiller increased as the cutting frequency decreased (P<0.05) and its greater value was recorded during summer with 5 wk frequency (108 cm2 tiller-1), similar to the one found at the summer 6 wk frequency (105 cm2 tiller-1), but significantly different and higher to those observed in all the other treatments (P<0.05). Relative to intercepted radiation, regardless of season (P<0.05) its greater values were found at the 6 and 7 wk cutting frequencies, averaging 90 %. As a conclusion, it can be stated that the greatest herbage yield was observed when the alfalfa was harvested at 6 and 7 wk cutting frequency in spring-summer and in fall-winter.

Keywords

Medicago sativa, Alfalfa, Cutting frequency, Herbage yield, Leaf area, Intercepted radiation.