

Abstract:

The study involved two experiments conducted on heavy clays under high day and night temperatures (40°/25°C) during most of the year. The treatments comprised two alfalfa cultivars (Pioneer 5929 and the local one) and six seed rates. After two months from sowing, the average plant population represented only 17.6% of the applied seed rate and progressively declined with time, and by the end of the first year it reached 8% of the applied seed rate. In contrast to plant population, the dry matter yield progressively increased with time and reached more than two tons/ha in most of the harvests. Pioneer 5929 outyielded the local variety in dry matter production. Seed rates over the range 12-27 kg/ha had no significant effect on dry matter production, and thus the seed rate could be reduced to 12 kg/ha or even lower without considerable effect on yield.