Abstract
The objective of this work was to study the performance of cotton crops under ultra narrow row spacing in comparison to the traditional planting system. Two production systems in rows spaced at 0.50 y 0.35 m (ultra narrow-rows) were evaluated in 2008 and 2009, with population densities of 90 000 and 110 000 plants/ha respectively, and rows spaced at 0.75 m with a density of 70 000 plants/ha were used as a control. The seed-cotton, lint-cotton yield and total dry matter were evaluated in both years. Crop growth rate (CGR), net assimilation rate (NAR), leaf area index (LAI), leaf area ratio (LAR), specific leaf area (SLA), and leaf weight ratio (LWR) were evaluated in 2009 only. For the estimation of these indicators, three destructive sampling protocols were conducted at 59, 79 and 100 days after sowing (DAS). Two plants were collected per plot and were analyzed for total dry weight, total dry weight of vegetative and reproductive organs and plant leaf area. For rows spaced at 0.35 m and a density of 110 000 plants/ha the seed cotton yield was 16 and 43% higher than 0.50-90 000 and 0.75-70 000 plants/ha respectively. Row spacing and plant population density did not affect the relative foliar size according with the LAR, SLA and LWR estimates.

Keywords
Gossypium hirsutum L., dry matter, crop growth rate, net assimilation rate, leaf area index.