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FORAGE YIELD OF RED CLOVER CULTIVARS ON ACID SOILS

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The main aim of red clover breeding, the second most important perennial forage legume in Serbia, is to create varieties that produce higher yields of forage. Besides that, in recent time it is important to create of high specialized varieties of high adaptability to specific areas of cultivation. Most European and Japanese manufacturers point out the advantage of tetraploid red clover varieties for forage production, which are characterized by higher and more stable yield, as compared to the diploid, while the American experiences are somewhat different. The aim of this work was to follow the forage and hay yield of one diploid (K-39) and one tetraploid (Amos) of red clover variety, on acid soil and in the conditions of dense sowing, during their production cycle of three years. The experiment was established in spring 2012 in Čačak (43°54'39.06" N, 20°19'10.21" E, 246m above sea level), on alluvium soil type, with acid reaction (pHH₂O 4,8). The experiment was based on a randomized block design with three replications, with plot size of 5m² (5x1m). Sowing was performed on 20 cm row spacing and seed rate of 18 kg ha⁻¹. The crop was grown without irrigation. The varieties were cut at budding stage. In 2012 a very small amount of rainfall was recorded (463 mm), especially during the growing season, in 2013 the rainfall was 583 mm, slightly below the long-term average, while in 2014 there was a considerably larger amount of rainfall (over 1100 mm). During all years of the research, the cultivars did not differ significantly among themselves in terms of green forage yield and hay yield. Due to the pronounced dry period in 2012, forage yield of both varieties was very low (3.11 to 3.52 t ha⁻¹). As the crop was badly prepared in 2012, low forage yield was also achieved in the first harvest in 2013 (5.0-6.3 t ha⁻¹). But in the third year (2014), there were three harvests at both of the cultivars, with total forage yield of 46.4-46.5 t ha⁻¹.

Key Words: Red Clover, Forage, Yield, Varieties