

**SEED YIELD OF BIRDSFOOT TREFOIL (*LOTUS CORNICULATUS* L.)  
CULTIVARS IN THE YEAR OF ESTABLISHMENT**

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**Abstract**

Production of sufficient quantities of forage is a prerequisite for the development of livestock production. In South-East Europe in less favorable growing conditions especially in terms of climate and soil, in order to produce sufficient quantities of forage, a special attention is given to the cultivation of the birdsfoot trefoil (*Lotus corniculatus* L.). One of the solutions for improvement of birdsfoot trefoil production is the production of the sufficient quantity of quality seeds. Field trial was established in 2012, on soil type cambisol in a randomized block design with three replications. Cultivars of birdsfoot trefoil (K-37, Rocco and Zora) were sown at a inter row spacing of 20 cm, using 10 kg ha<sup>-1</sup> of seeds. The aim of the study was to analyze in the year of establishment seed yield and yield components: number of stems m<sup>-2</sup>, number of flowers per stem, number of inflorescences m<sup>-2</sup>, number of flowers per inflorescence, number of pods per inflorescence, number of seeds per pod and thousand grains weight. Cultivar Rocco had significantly higher seed yield (408.6 kg ha<sup>-1</sup>) in relation to the cultivars K-37 and Zora (85 kg ha<sup>-1</sup> and 54 kg ha<sup>-1</sup> respectively), which arises from the significantly higher number of flowers per stem and inflorescence m<sup>-2</sup> in relation to the other cultivars. Cultivar Rocco had also a significantly higher number of pods per inflorescence than the K-37 cultivar. Number of flowers per stem, number of inflorescences m<sup>-2</sup> and number of pods per inflorescence were significantly positively correlated with the seed yield.

**Key words:** birdsfoot trefoil, seed yield, yield components.

**Introduction**

Birdsfoot trefoil (*Lotus corniculatus* L.) is a perennial forage legume that is widely distributed in the world. Originates from Western Europe and North Africa (Buselinck and Grant, 1995). In the Republic of Serbia, there are no reliable statistics on the areas where it is grown and yields, although among perennial legumes according to the prevalence it takes the third place, after alfalfa and red clover. It is especially important in the hilly and mountainous areas of Serbia (Petrovic et al., 2011) with regard to its often use when establishing turf in some poor growing conditions (Dimitrova, 2010). According to Vučković (2004) average green forage yields of birdsfoot trefoil range from 35-40 t ha<sup>-1</sup>, and hay from 8-10 t ha<sup>-1</sup>. As a high level in potential of forage yield at this species was obtained, it is also necessary to include monitoring of the most important properties of seed yield and its components. Increasing the potential for seed yield is a rarely important criterion in the early stages of birdsfoot trefoils selection. Breeding for increased potential for seed yield is considerably more difficult due to the lack of clear interdependence between seed yield and its components. On the other hand, the existence of significant genetic correlation between harvest index and seed yield suggests the possibility of increasing seed yield, without affecting the forage yield (Elgersma and Van









