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## Yield and cost-effectiveness of alfalfa hay production as dependent on fertilization

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**Abstract:** Alfalfa is the most important forage crop in Serbia grown for high yields of quality fodder. In order to expand alfalfa production on pseudogleys, research was conducted in the vicinity of Kraljevo. Results suggest the potential for growing alfalfa on acid soils in Serbia. The combined use of 2.5 t ha<sup>-1</sup> and 5 t ha<sup>-1</sup> lime and 30 t ha<sup>-1</sup> manure on the pseudogley increases the soil pH, humus content and available phosphorus and potassium levels, while decreasing the content of mobile aluminum, thus making the soil suitable for alfalfa production and high biomass yields (115.9 t ha<sup>-1</sup>) during 3-4 years of stand utilization.

**Key words:** alfalfa, fertilization, lime, yield, cost-effectiveness

### Introduction

Alfalfa as a forage crop is highly adapted to a range of soil and climatic conditions in Serbia. It is grown on about 200,000 ha, giving an average hay yield of 5.7 t ha<sup>-1</sup> (SGS, 2011). However, the use of modern cultivars, fertilization, irrigation, weed, pest and disease control, proper utilization and cutting frequency

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