



RESEARCH ARTICLE

The effect of the use of macroelements on the capability of production of two variety of flue-cured tobacco

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ABSTRACT

In order to investigate the effect of macroelements on the capability of production of flue-cured tobacco, a factorial field experiment was conducted during 2008-2009 in tobacco research institute with tree replications and eight treatment. The used nitrogen fertilizer levels were 35-45-55-65 kg N/ha as urea and the used potassium fertilizer levels were 150-200 kg K₂O/ha as potassium sulphat. The used cultivars in this experiment were Coker347 and K326. According to the results, the effect of nitrogen on Coker347 cultivar yield in first and second years was significantly at the %1 level ($p < 0.01$). Also the effect of nitrogen on K326 cultivar yield in both of years was significantly at the %5 level ($p < 0.05$). The effect of potassium on Coker347 cultivar yield in first and second years was significantly at the %1 level ($p < 0.01$). Also the interaction between nitrogen and potassium on Coker347 cultivar yield was significant at the %1 level ($p < 0.01$) in first year and %5 level ($p < 0.05$) in second year.

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INTRODUCTION

Different varieties of tobacco like other agricultural plants during lifetime and different processes of growth, need an exact extent of different substances so that the resulted leaves would have a good quality in scent, taste and being briquette and also have appropriate weight and leaf size. It must be mentioned that chemical fertilizer consumption in tobacco is a very sensitive issue; therefore, consumption of it should be together with enough science, information and experience. On the one hand, nutritious needs of tobacco is variable depending on variety, weather conditions, soil and so on, and to determine appropriate amount of chemical fertilizer of tobacco it is necessary that investigation and research on variety or varieties would be done in cultivation place or at least those studies that have been done in similar conditions

on the considered variety in other regions would be used as the source and resource (Mehdi, 2005). Among food elements, nitrogen and potassium are usually the most important elements for using most of plants like tobacco. Among features of nitrogen fertilizer we can point out instability and wastage of major part of it after consumption in soil, so that efficiency of nitrogen fertilizers consumption in Iran has been assessed almost 50 per cent. It means that in consumption of nitrogen fertilizers, the extent and way of consumption should be notified carefully. Irregular consumption of nitrogen chemical fertilizers not only is economically remarkable but also because of pollution of surface and underground waters has created several difficulties (Abbas, 1999). The aim of tobacco cultivation is to produce leaf with more or less components of foodstuffs elements with dominant amount that could be