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Deficiencia de potasio en cultivos extensivos de Brasil

Flávia Rezende Reis

Agronomy & Climate Change Workgroup

Technical paper– *Artículos técnicos*

Grupo de Trabajo Agronomía y Cambio Climático

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Flávia Rezende Reis. Agroatacado. Brazil

Agronomy & Climate Change Workgroup

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Abstract

In the present paper the author describes the most relevant potassium deficiency symptoms on the following extensive crops of Brazil: soybean, coffee, sugarcane and maize. She also describes the causes of such deficiencies.

Key words: soybean, coffee, sugar cane, maize.

Resumen

En el presente trabajo la autora describe los síntomas más característicos de carencia en potasio, observados en los siguientes cultivos extensivos de Brasil: soja, café, caña de azúcar y maíz. Describe, así mismo, las causas responsables de la aparición de dicha sintomatología.

Palabras clave: soja, café, caña de azúcar y maíz.

1. The absorption of potassium by plants and its importance for crop production

Potassium is absorbed by plants from the soil solution in the K+ form. This absorption mainly depends on the diffusion of this element on the soil solution to access to the root surface.

The process of potassium absorption is very similar to the phosphorous absorption, nevertheless, the mobility of the first is greater than that of the second. This causes the rapid reduction of the level of the first on soil, due to its absorption by plants.

Potassium is probably the most recycled element by plants, removing it from deep layers to the surface of the soil.

The possibility of potassium absorption by crops is related to the soil water contents as well as to the calcium and magnesium levels. The water level reduction on soil is related to potassium diffusion, hindering the absorption of this element by roots. It is relatively frequent to observe on the farms, that on dry years, the potassium absorption levels may reduce significantly.

Potassium has a great influence on crop quality, increasing crop weight, the number of seeds per spike –specially on maize–, increasing the level of soybean protein, increasing the level of sugar on sugarcane, increasing the level and resistance of cotton fibre, increasing the quality of grain wheat for bread and increasing the longevity of forages.