

## VARIABILITY OF THE pH AND OF THE CONTENT OF IRON ASSIMILABLE FROM THE SOIL IN THE CONTEXT OF THE PRESENCE OF BICARBONATES

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### Abstract

In order to study the effect of various species of bicarbonates on the pH and on the content of DTPA-extractable iron, an experiment was organized, showing the effect of 7 progressive concentrations (from 0 to 3%) of ammonium, sodium and potassium bicarbonates. The results show the progressive increase of the pH proportionally to the concentration of bicarbonate ion, as well as an initial decrease and then an increase of the extractable iron content. The pH of the soil in the experiment is 5.44 and its DTPA-extractable iron content is 158 mg/kg; following the addition of the bicarbonates, the pH increases up to about 10 in the case of the sodium and potassium bicarbonates and up to 8.5 in the case of the ammonium, while the extractable iron decreases to about 100 mg/kg and then it increases to about 680 mg/kg in case to the sodium, 176 mg/kg in case of the potassium and 130 mg/kg in case of the ammonium.

**Key words:** iron chlorosis, iron, bicarbonate, pH