

DECREASE OF CARBONATES IN SANDY SUBSTRATE WITH TWO DIFFERENT TYPES OF VEGETATION

INTRODUCTION

Study of changes in carbonate content with different type of vegetation.

The root architecture of a plant, It is composed of a linear underground organ with very complex architecture and growth patterns, being the root system itself defined mainly by the type of plant, the structure of the soil, and the interactions between the root and the soil.

EXPERIMENT EVOLUTION



Construction: April
The experiment was located inside of the Mendel University in Brno

June
Vegetation: A-B (on the column) (blanc), (1), (2), (3) on the row

June
Vegetation: A-B (on the column) (blanc), (1), (2), (3) on the row

August
Vegetation: A-B (on the column) (blanc), (1), (2), (3) on the row

October
Vegetation: A-B (on the column) (blanc), (1), (2), (3) on the row

Vegetation mix was chosen: “*Poa nemorales*”, “*Dactylis glomerata*”, “*Brachypodium sylvaticum*”, “*Chinopodium vulgare*” representing the vegetation A, and “*Lolium perenne*”, “*Lolium perenne squirrel*”, “*Festuca rubra*”, “*Poa pratensis*” this last mixture represents the vegetation B.

In each container the content of CaCO_3 it was different, in the first one was for control and no carbonates was added (blanc), in the second one (1) 10 grams were added of calcium carbonate, in the third one (2) 20 grams were added, and in the fourth one (3) 40 grams.

RESULTS

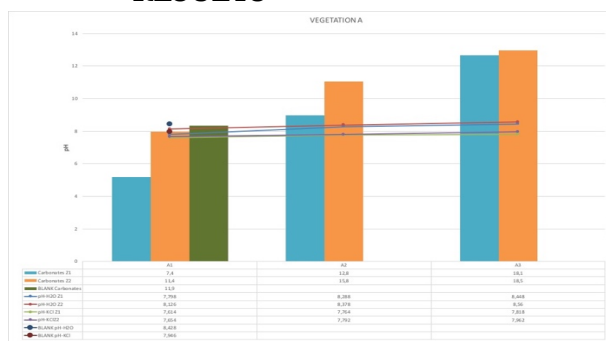


Fig.1



Fig. 2

The results obtained:

Geotechnical tests: the humidity percentage was 6,75%. The granulometric fractions were: thick materials 22.2%, sandy materials 77% and fine materials 0,7%.

The results of the chemical analyzes can be seen in the graphs (Fig. 1 and Fig. 2) which are attached below. It can be seen that in vegetation A the pH values remain constant in Z1 and Z2, not being so in vegetation B, having small differences between Z1 and Z2.

DISCUSSION

During the growth of the roots, a large amount of organic compounds called exudates are generated, among these compounds are mainly carbohydrates, carboxylic acids and amino acids in different concentrations. These compounds intervene in the change of soil pH, which is why alkaline soils can become acidic.