Use of Phosphorus Solubilizing Bacteria with Application in Agriculture

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Maize (Zea mays) is one of the most cultivated cereal in the world, but its growth has been accompanied by intense phosphorus fertilization, generating diverse enviromental problems; this is caused because the phosphorus is not totally absorbed by the plant, contaminating the ground. This study proposes utilizing phosphate solubilizing bacteria (PSBs) as a way of sustainable agricultural practice. Utilizing the bacteria, Bacillus megaterium, to acidify growth medium and to increase the growth and phosphorus nutrition of maize plants we expect to demonstrate its capacity to achive better results against cultives without the bacteria. To investigate the effectiveness of the use of bacteria in maize plants, we grew various Bacillus strains at the laboratory so we could utilize them in a variety of assays, in solid and liquid mediums. This assays, helped to visualize the solubilization halos and tested the change in pH of the growth mediums. Taking care of the inoculation of the maize seeds, they were soaked up in differents bacterial suspensions and then, placed in soil to let them grow; data was taken for a 30 day lapsus. To evaluate the results of the assays factors like height of the plant, dry weight and total phosphorus were review. It was thus as we verified that the strains of Bacillus.

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