The Brachiaria humidicola in the Soils of Puerto Rico and Its Contribution to the Environment

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The purpose of this investigation is to demonstrate that Brachiaria humidicola, a pasture that grows in cattle farms, provides great benefits both to the environment and agriculture. The problem to investigate was to determine if Brachiaria humidicola contributes to capture carbon and nitrogen in Puerto Rico's soils. Because soils where the grass is growing are fertile, the following hypothesis was studied: Brachiaria humidicola contributes to the fixation of carbon and nitrogen in soils, helping to minimize the production of greenhouse effect gases and improving soil composition. As part of the experimentation, areas where the forage had been growing during one year and three year periods were identified. Samples of those soils and of soils where other forage grow were collected. These samples were sent to a laboratory, where analyses were conducted in order to determine levels of carbon and nitrogen in each one of them. These analyses were made two times, one in August and the other in December, 2015. Analysis results demonstrated that carbon and nitrogen concentrations were higher in samples of soils where Brachiaria humidicola grows compared to the concentrations found in samples of soils where other forage grow. Because soils where Brachiaria humidicola grows were retaining both carbon and nitrogen, it is implied that chemical reactions that release carbon dioxide and nitrites to the atmosphere are reduced considerably. Since Puerto Rico's northern area is one of many farming and agriculture practices, promoting sowing of this grass is a great ecofriendly option.

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