Abstract

The objective of this study was to examine the alkalithermophilic actinomycete communities in the subtropical environment of Jujuy, Argentina, characterized by sugarcane crops. Laceyella putida, Laceyella sacchari, Thermoactinomyces intermedius, Thermoactinomyces vulgaris and Thermoflavimicrobium dichotomicum were isolated on the media with novobiocin, from sugar cane plants and renewal rhizospheres, and grass and wood soils. Soil pH was almost neutral or lightly alkaline, except for grass soil acidified by lactic liquor. A smaller number of actinomycetes was found on the living plants and bagasse (recently obtained or stored according to the Ritter method) with respect to decomposed leaves on the soil. Thermophilic species of Laceyella, Thermoactinomyces, Thermoflavimicrobium, Saccharomonospora, Streptomyces and Thermononospora were isolated on the media without novobiocin, from composted sugar cane residues. Air captured near composted bagasse piles, contained alkalithermophilic actinomycete spores.

Keywords

Actinomycetes, Subtropical soils, Sugar cane, Bagasse