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Peudomonas fluorescens diversity and abundance in the rhizosphere

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It is now over 30 years since that a several plant associated strains of fluorescent Pseudomonas spp. are known to produce antimicrobial metabolites, playing a significant role in the biological control of a lot of plant diseases. For that, the interest in the use of these bacteria for biocontrol of plant pathogenic agents has increased. However, few comprehensive
studies have described the abundance of this soil borne bacteria in the region of Mascara (Northern-Algerian West). In the connection of this problem, this work was done by monitoring the number of indigenous Pseudomonas fluorescens organisms in three stations characterizing different ecosystems, to document their abundance, diversity and investigate the relationship between P. fluorescens abundance and soil properties. Our quantitative plate counting results hence the conception of their ecology in the rhizosphere. Thus, quantitative results has confirmed that P. fluorescens are successful root colonizers with strong predominance and competed for many ecological niche, where their distribution were correlated significantly ($P<0.05$) with the majority of soil properties.

Keywords: P. Fluorescens, Ecosystems, Abundance, Diversity, Correlated, Soil Properties.