Interactions between soil microorganisms and the invasive species *Acacia mearnsii* De Wild. in the north-eastern Algeria

Boudiaf I.[1,2,3], Le Roux C.[3], Beddiar A.[1,2], Prin Y.[3] & R. Duponnois[4]

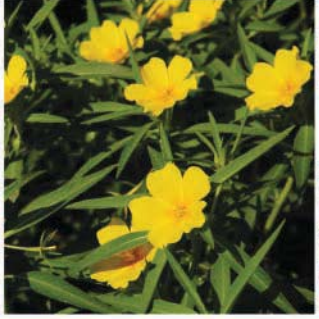
[1]LBVE, Université Badji Mokhtar, Algeria
[2]ONEDD, Algeria
[3]CIRAD, UMR LSTM, France
[4]IRD, UMR LSTM, France

E-mail (corresponding author): imenbiotec@hotmail.com

Soil microorganisms play a key role in the terrestrial ecosystems; they directly affect the development of plants, in a more or less significant way, depending on the plant species. The cork oak, *Quercus suber* L., is one of the most important tree species in Algeria but cork's overexploitation has led to the degradation of cork oak forests. To restore these degraded areas, reforestations with exotic species such as *Acacia mearnsii* De Wild. were made in the 70's. It is from this reforestation stands that *A. mearnsii* started to invade surrounding cork oak trees.

We aimed at analyzing the impact of *A. mearnsii* introduction on composition and functioning of symbiotic microbial communities in the rhizospheric soil of cork oak trees in the El Kala National Park. The analysis of abundance and diversity of symbiotic microflora was carried out by comparing a non-invaded forest soil with a cork oak forest soil totally invaded by *A. mearnsii*. *A. mearnsii* seedlings were grown in the greenhouse on pure cork oak forest soil for 6 and 12 months, and then replaced by cork oak seedlings. Our results showed that soil microbial activity was modified according to the duration of acacia growth, but we did not detect any effects of impacted soils on cork oak plant growth.

Keywords: Invasive plants; Algeria; *Quercus suber*; *Acacia mearnsii*; Catabolic activity; Terrestrial microorganisms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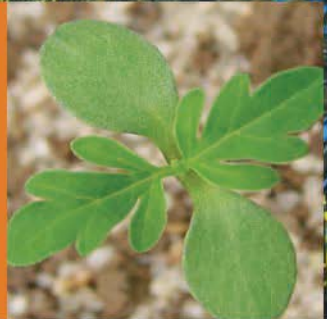


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