

**Name:** Didier LESUEUR  
**Position Title:** Senior International Staff  
**Specialty Area:** Soil Microbiologist  
**Current time allocation:** 100%

**Appointment Date:** Placed in  
TSBF/CIAT since September 04

Project	FTE
PE-2	100%

**Education:**

- Ph.D.* 1992 at the University Pierre et Marie Curie Paris (France) / Option Biology and Physiology of Plants.
- M.Sc.* 1988 at the University of Orsay / Paris XI (France) and 1989 at the University Pierre et Marie Curie Paris (France) / Option Biology and Physiology of Plants.
- B.Sc.* 1985 at the Ecole Nationale de Chimie, Physique et Biologie, Paris (France) / Option General Microbiology and Biochemistry.

**Positions held (since terminal degree):**

- Title, affiliation, years
  - *November 1992 to June 1995:* Researcher /Soil Microbiologist to the Forest Dept of CIRAD, Laboratoire de Biotechnologies des Symbioses Forestieres Tropicales de Nogent/Marne a Paris (France)
  - *July 1995 to August 1996:* Researcher /Soil Microbiologist to the Forest Dept of CIRAD, Campus de Baillarguet, Montpellier (France).
  - *September 1995 – August 2004:* Researcher /Soil Microbiologist to the Forest Dept of CIRAD, Laboratoire de Microbiologie des Sols de l'IRD, Dakar (Senegal)
  - *September 2004 up to now:* Researcher /Soil Microbiologist to the Forest Dept of CIRAD, Unit of Research 080 "Ecosystems of Plantations", TSBF/CIAT, Nairobi (Kenya).

**Research Responsibilities (2002 – present):**

- List here briefly your major research activities and areas of expertise
  - Soil Microbiologist who was more concerned during 8 years on the utilization of microsymbionts (Rhizobium and Mycorrhiza) to optimize the growth of tree legumes (Indigenous and Exotic) in agroforestry systems in Africa. Many experiments were carried out in the field in collaboration with local authorities and group of farmers. Utilization and transfer of those results to a private company located in Mauritania for the production of wind-break in an irrigated farm.
  - Impact of the rhizobial inoculation of mature-trees of *Acacia senegal* and improvement of their capacity to produce more gum-arabic. For this, we had to take into account the microsymbionts but also the heterotrophic microbial communities associated to the roots of the trees in relation with the availability of the soil organic matter (Carbon and Nitrogen cycles). Determination of technical protocol for a sustainable and more efficient management of the soil bio-functioning.

**Professional Service (2002 – present):**

- Memberships & services in scientific societies
- Service on editorial boards
- Contributions to major global/regional initiatives and task forces
- Contributions to major international conferences (organizer)

### Honors and Awards (since terminal degree):

- Only list major honors and awards

### Graduate Student Advisement (2002 – present):

<u>Degrees completed</u>	<u>Current</u>
M.S. 6	M.S. 1
Ph.D. 1	Ph.D. 3

### Refereed journal publications (2002-2006)

- Only list papers that were published or have been accepted for publication in peer-reviewed international journals; do not include papers that have been submitted
- Diouf D, Sougoufara B, Neyra M, Lesueur D (2002) Le reboisement au Sénégal : Bilan des réalisations de 1993 à 1998. **Revue forestière française**, 3: 1-7.
- Duponnois R, Founoune H, Lesueur D (2002) Influence of the controlled dual ectomycorrhizal and rhizobal symbiosis on the growth of *Acacia mangium* provenances, the indigenous symbiotic microflora and the structure of plant parasitic nematode communities. **Geoderma**, 109: 85-102.
- Odee DW, Indieka SA, Lesueur D (2002) Evaluation of inoculation procedures for *Calliandra calothyrsus* Meisn. grown in tree nurseries. **Biology and Fertility of Soils** , 36: 124-128.
- Diouf D, Forestier S, Neyra M, Lesueur D (2003) Optimisation of inoculation of *Leucaena leucocephala* and *Acacia mangium* with rhizobium under greenhouse conditions. **Annal of Forest Sciences**. 60, 379-384.
- Thiao M, Neyra M, Isidore E, Sylla S, Lesueur D. (2004) Diversity and effectiveness of rhizobial strains from *Gliricidia sepium* native to Reunion Island, Kenya and New Caledonia. **World Journal of Microbiology and Biotechnology**. 20 (7), 703-709.
- Duponnois R and Lesueur D. (2004). Sporocarps of *Pisolithus albus* as an ecologia niche for fluorescent pseudomonad involved in *Acacia mangium* Wild-*Pisolithus albus* ectomycorrhizal symbiosis. **Canadian Journal of Microbiology**. 50 (9), 691-696.
- Sarr A, Diop B, Peltier R, Neyra M, Lesueur D. (2005) Effect of rhizobial inoculation methodologies and host plant provenances on nodulation and growth of *Acacia senegal* and *Acacia nilotica*. **New Forests**, 29, 75-87.
- Lesueur D and Duponnois R. (2005) Relations between rhizobial nodulation and root colonization of *Acacia crassicarpa* provenances by an arbuscular mycorrhizal fungus, *Glomus intraradices* Schenk and Smith or an ectomycorrhizal fungus, *Pisolithus tinctorius* Coker & Couch. **Annals of Forest Sciences**, 62, 467-474.
- Sarr A, Neyra M, Oihabi A, Houeibib MA, Ndoeye I and Lesueur D. (2005) Characterization of native rhizobial populations presents in soils from natural forests of *Acacia senegal* and *Acacia nilotica* in Trarza and Gorgol regions from Mauritania. **Microbial Ecology**, 50, 152-162.
- Diouf D, Duponnois R, Ba AT, Neyra M and Lesueur D. (2005) Influence of rhizobial and mycorrhizal symbioses on growth and mineral nutrition of *Acacia auriculiformis* and *Acacia mangium* under salt stress conditions. **Functional Plant Biology**. 32 (12), 1143-1152.
- Faye A, Sarr A and Lesueur D. (2006) Effect of inoculation with rhizobia on the gum-arabic yield of 10-year-old *Acacia senegal* trees. **Arid Land Research Management**. 20 (1), 79-85.

### Invited keynote presentation at major international conferences (2002-2006)

- Only list invited keynote or plenary presentations at major international conferences of global scope

**Research Grants (2002 – present):**

- Only list grants on which you were the lead scientist or a principal investigator with major contributions

Funding source	Grant Title (Principal investigators)	Amount US\$	Period
European Commission INCO-DEV	<b>Co-ordinator</b> of an European INCO project n° ERBIC18-CT97-0194 entitled « <b>Evaluation and utilization of the biodiversity des microsymbionts from <i>Calliandra calothyrsus</i> for optimizing the forage production in the small farms from humid tropical countries</b> ». Countries involved: Cameroon, Kenya & Costa Rica.	300,000 for a total of 2 millions	December 1997 – November 2001
European Commission INCO-DEV	<b>Contractor</b> of an European INCO project n° ICA4-CT-2001-10093 entitled « <b>Symbionts in Agroforestry Systems : what are the long-term impacts of inoculation of <i>Calliandra calothyrsus</i> and its intercrops</b> ». Countries involved : Kenya et Zimbabwe.	150,000 for a total of 1.5 millions	December 2001 – November 2006
European Commission INCO-DEV	<b>Contractor</b> of the European INCO project entitled « <b>Bridging restoration and multi-functionality in degraded forest landscape of Eastern Africa and Indian Ocean Island</b> ». Countries involved : Kenya, Ouganda & Madagascar.	120,000 for a total of 2.0 millions	Juin 2005 – Mai 2009
European Commission INCO-DEV	<b>Co-ordinator</b> of an European INCO project which has been short-listed for funding in January 2006 (Negotiation in progress).  « Innovative management of <i>Acacia senegal</i> trees to improve resource productivity and gum-arabic production in sub-Saharan Africa” (ACACIAGUM). Countries involved: Cameroon, Kenya, Niger & Senegal	250,000 for a total of 2.2 millions	December 2006 - November 2010