

**Sabine DEMOTES-MAINARD**

French

Postal address

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**Education**

1994: **PhD** from Institut National Agronomique Paris-Grignon (now AgroParisTech), Paris, France, with honors, graduated *summa cum laud.* “Effects of low radiation and low temperatures during meiosis on the gametic fertility of winter wheat.”

1990: Diploma of **Ingénieur Agronome**, equivalent of **Master 2 Degree** from Institut National Agronomique Paris-Grignon (now AgroParisTech). Speciality in Agronomy and plant science.

**Research experience**

**2007-2025:** Researcher at the French National Research Institute for Agriculture, Food, and Environment (INRAE), I’m working in the unit “Research Institute on Horticulture and Seeds” (IRHS) in Angers, France. My research aims to understand the mechanisms of plant architectural plasticity in response to environmental conditions and how this plasticity impacts ecosystem services and plant agronomic performance.

**1999-2007:** Researcher at the French National Institute of Agricultural Research (INRA) in the unit “Agronomical Sciences Applied to Horticulture”, in Angers, France. I developed and assessed indicators of nitrogen status for a range of woody ornamental plants and a methodology to assess ornamental plant visual quality.

**1994-1999:** Researcher at INRA in the unit “Agronomy laboratory”, in Grignon, France. I studied the joint effects of light intensity and nitrogen nutrition on the kernel number of wheat, investigating the relationships between kernel set, spike growth, and assimilate distribution within the plant. October-November 1997: mission in Argentina as part of an ECOS SUD program, a collaborative project studying the genotype x environment interaction in wheat.

**1990-1994:** PhD student and researcher at INRA in the unit “Genetic and Plant Breeding” in Rennes, France. I demonstrated that the severe reductions in kernel numbers observed in some wheat varieties were due to low light intensity during meiosis, which induced pollen sterility and prevented fertilization at flowering.

**Team leadership**

**From September 2023 onwards:** Leader of STRAGENE research team, unit IRHS

**2022-2023:** Deputy head of the STRAGENE research team

**2004-2006:** Deputy head of a research team of 21 persons

**Publications**

37 publications in international journals with peer review in 2025

H index: 23 (Google scholar)

HAL: [Click-here-to-view-publications-in-HAL](#)

### Skills

**Scientific Expertise:** Design, implementation, and management of research programs focused on plant ecophysiology in response to environmental factors, particularly light (intensity and quality), water stress and urban environmental conditions, utilizing multi-scale and interdisciplinary approaches.

**Methodologies:** Proficient in phenotyping and analyzing plant architectural development, characterizing plant ecophysiology, characterizing and manipulating physical environments.

**Management:** experience in team leadership, project development, mentoring postdoctoral researchers, PhD students, graduate and undergraduate students, as well as collaborating with technical staff.