

# Summer School

## *French Agriculture in Nouvelle-Aquitaine: from the laboratory to the field*

July 15<sup>th</sup> – July 30<sup>th</sup>, 2017



### In a nutshell...

**This summer school introduces students with a scientific background to agriculture challenges based on environmental issues such as climate change and food security.**

During the two week session, students learn in a variety of ways with a program that offers:

- › Classes that cover the main agricultural challenges;
- › Guest lectures on certain aspects of climate change and consequent effects on agriculture;
- › Visits of research laboratories, farms, fish farms, private companies, greenhouse and field experiments, forests, vineyards as well as historical castles.



### A panel of experts

The program of the Summer School is organized jointly by the University of Bordeaux and the French National Institute for Agronomy. Instructors and guest lecturers are scientific experts from governmental research institutions, organizations dedicated to agricultural development, farmers, food and agricultural industrialists and professors / associate professors from the University of Bordeaux.

### › Program

#### 1<sup>st</sup> week program: From the laboratory...

The first week will be devoted to exploring the existing links between climate change, agricultural production and biotechnology. Via practical and group work, students will understand the role of fundamental research in testing innovative solutions for agriculture. The aim is to provide students with a comprehensive toolbox that will allow them to carry out a needs analysis of modern agriculture. This is achieved through an overview of the main challenges of French agriculture and the links between fundamental research and biotechnological solutions for agriculture.

Themes to be explored:

Pollen in ambient hot temperatures and development consequences – Tomato fruit composition impacted by climate changes – Flood versus drought: respiration/transpiration in plants – Mildew: how to fight without chemicals – Pollen spreading: flying or living – Color the life: fruit attractiveness.

#### 2<sup>nd</sup> week program: ...to the field!

During the second week, in order to combine theory with the practice and reality of the professional world, specific theme days are organized. The days are based on the agricultural sectors listed below.

Students may thus discover the research laboratories and experimental facilities available at the University of Bordeaux, discuss with researchers who are active within chosen themes and visit agricultural and industrial facilities in Aquitaine to exchange with professionals from each industry.

#### Visits of laboratories, farms, industrial campus sites

##### Day 1: Forest and Arcachon Bay

› Laboratory (Pierroton INRA), Oyster House at Gujan - Mestras and the Dune of Pyla, Sturgeon rearing for caviar production (Mios).

##### Day 2: Corn and poultry

› "Maisadour" factory (Mont-de-Marsan), experimental unit on palmipeds (Artiguères) and poultry farm.

##### Day 3: Tomato and carrot

› Pot au Pin farm (Cestas) and 10 hectare tomato greenhouse (Parentis-en-Born).

##### Day 4: Strawberry

› "Ciref" - center for the selection of strawberry varieties (Douville)

##### Day 5: Vine and Wine

› Laboratories at the Institute of Vine and Wine Science (ISVV) and the vineyard of Château Couhins

## Bordeaux and the region of Nouvelle-Aquitaine

**Bordeaux, a city renowned for many good things: listed as part of the UNESCO World Heritage list, described as "an outstanding urban and architectural ensemble", classified as "City of Art and History" and last but not least, the wine capital of the world!**

Home to over 360 historical monuments, Bordeaux is capital of the Nouvelle-Aquitaine region in south-west France, where over 10,000 wine-producing châteaux are situated. It is the largest region in France and thanks to its advantageous location and mild climate, Nouvelle-Aquitaine is renowned for its high quality of life. Less than an hour away lie the sunny beaches of the Atlantic coast and the rolling landscapes of the region's famous vineyards. Further south the historic and cultural treasures of the Pays Basque and the Pyrenees may be discovered.

### A "Green" Campus

The "Green" Campus of the University of Bordeaux is located on just over 50 ha of land that features buildings, vineyards and orchards. Located about 20 minutes from downtown Bordeaux, the campus provides the benefits of country-living while remaining a convenient distance from the city center. The main campus includes administration services, a library, institutes with research laboratories, amphitheatres, greenhouses, vineyards and orchards.

The Green Campus is acknowledged as a leading campus for research and innovation in biology, biotechnology, agriculture and environment. It is home to world-class academic research laboratories that conduct research in plant science, ecology and the environment in response to current challenges within the agricultural, forestry and aquaculture sectors.

### Making the most of your stay!

In addition to the lectures and practical/group work, the two week summer school program is balanced with many cultural events and excursions (just some examples: historical sites of Bordeaux city, Montaigne Tower, Roquetaillade Castle, the Dune of Pyla, the town of Saint-Émilion and its vineyards, Gujan Mestras harbor on Arcachon bay, renowned for its oysters, a modern fish farm for sturgeon and caviar production, Château Couhins and its wine cellar, etc).

## The leading agricultural region in France

**Agriculture, forestry, fishing and aquaculture all play a major role in the regional economy. Considerable investments are made in the agricultural sector (10% of the regional budget versus a national average of 4%).**

Aquitaine is the top region in France for the production of fine wines. It also leads for corn, tobacco, dry prunes, strawberries, kiwis, nuts, sweet corn, geese, ducks and quails. The region is particularly renowned as the main producer of "foie gras" (fat liver). This intensive agricultural production is complemented by farming practices especially in the Pyrenees and in the foothills of the Massif Central. In addition, Aquitaine is home to the largest forest area in Europe, known as the "Landes" forest, occupying 900,000 hectares.

### Practical information

**Dates:** July 15th - July 30th, 2017.

**N° participants:** 16 maximum

**Language:** classes are conducted in English.

**Location:** classes and guest lectures take place on the Talence Campus of the University of Bordeaux and on the Green Campus.

**Participant profile:** students must have successfully studied a life science subject (e.g. biology, biochemistry, biotechnology, molecular biology, biomedicine) for at least one year. The course is designed for undergraduate students who wish to discover the links between research and agriculture production and who plan on continuing their studies in biology, agronomy and/or plant sciences.

**Applications:** to be completed on-line via our website: [BSS-frenchagri.u-bordeaux.fr](http://BSS-frenchagri.u-bordeaux.fr)

**Deadline:** May 15th, 2017. Selected participants will be notified within one week after the application deadline.

**Participation fee:** 700€ (including costs for excursions, lunch and accommodation).

### CERTIFICATES AND ECTS CREDITS UPON COMPLETION

**Certificate of attendance:** participants will receive a certificate of attendance.

**ECTS credits** may be obtained as follows:

» 2 ECTS credits (equivalent to 1 U.S. credit) by attending the Summer School

» 5 ECTS credits (equivalent to 2.5 U.S. credits) by attending the Summer School and submitting a paper of about 10,000 words up to 4 weeks after the end of the Summer School. The topic of the paper should be determined in collaboration with the Summer School Coordinator and the submission deadline is September 2017.

*Please note that the University of Bordeaux recommends that home institutions award participants with 2 / 5 ECTS credits (equivalent to 1 / 2.5 U.S. credits).*

### More information

[BSS-frenchagri.u-bordeaux.fr](http://BSS-frenchagri.u-bordeaux.fr)

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