

### Agriculture - Agronomy

France is the European Union's largest agricultural producer, followed by Germany, Italy, and Spain. With over 500,000 farms, agriculture accounts for more than 1 million jobs in France. Most of these are in the sectors of cereal production and dairy farming, but also in market gardening, viticulture, arboriculture, and horticulture. The arable crop sector is composed primarily of cereals (wheat, barley, corn, etc.), oilseeds (sunflower, colza, soy, etc.), and protein crops (peas, beans, etc.).

The census of agriculture reveals the richness and diversity of French agriculture: cereals, fruits, garden farming, wines, livestock, etc. With regard to medium and large farms, 30% specialize in cattle, 23% in arable crops, and 15% in viticulture. Organic farming is also growing in France with more farmers involved in on-farm processing and short food supply chains.

Thousands of jobs will need to be filled in agriculture, agribusiness, and forestry. From trees to wood products, the wood-forest sector includes diverse fields such as silviculture, logging, wood furniture, construction, sawing, woodwork, and the paper and cardboard industry.

Programs in agriculture are broken down into 8 subject areas: production, processing, spatial planning and environmental protection, equipment, marketing and sales, services, equestrian activities, and animal husbandry and care.

#### Agriculture by the numbers

- 282,000 km<sup>2</sup> of agricultural land in France
- 51% of the total area of France is agricultural land
- 39% of the total area of France is "natural" lands (forests, moorlands, scrublands, etc.)
- 15 million hectares devoted to arable crops (2010)
- 515,000 farms in metropolitan France
- 950,000 people live and work on farms in France
- 3.5% of French farms are involved in organic production (2010)
- 18,000 farms produce certified organic plant or animal products

source: French Ministry of Agriculture, Agrifood, and Forests, <http://agriculture.gouv.fr>

#### INTERNATIONAL

Europe is the world's leading agricultural power in terms of production value and the share of the working population employed in agriculture.

France is the 8th agricultural power in terms of contribution to the total value of global agricultural production.

French agricultural production is valued at € 76 billion, far ahead of Germany (56 billion), Italy (49 billion), and Spain (43 billion).

France is also a global leader in exports of wheat, seeds, alcohols, wines, and spirits.

#### Related fields

Aquaculture – Biology – Chemistry – Ecology – Economics and management – Geography – Veterinary medicine – Enology – Earth and space sciences – Shipping – Viticulture

#### Subfields

Equestrian activities – Agri-food – Agro-ecology – Food – Land planning and landscaping – Atmosphere – Biodiversity – Biotechnologies – Climate change – Climate challenges – Sustainable development – Water – Eco-technologies – Emissions – Ecological footprint – Carbon footprint – Alternative energies – Epidemiology – Forestry – Greenhouse gases – Genetics – Water management – Horticulture – Hydrology – Environmental engineering – Natural habitats – Environmental protection – Global warming – Public health – Aquatic sciences – Food safety – Silviculture – Water technologies – Earth – Veterinary sciences

#### Useful links

- ABioDoc, French national resource center for organic agriculture: [www.abiodoc.com](http://www.abiodoc.com)
- Agreste (agricultural statistics, assessments, and outlooks): <http://agreste.agriculture.gouv.fr>
- Agroécologie (MOOC) – Agreeenium-IAVFF: <https://www.france-universite-numerique-mooc.fr>
- ANEFA (French national association for agricultural employment and training): <http://anefa.org>
- APECITA (French association for managers, engineers, and technicians in the agricultural and agrifood industries: [www.apecita.com](http://www.apecita.com))
- APCA (French permanent assembly of chambers of agriculture): [www.chambres-agriculture.fr](http://www.chambres-agriculture.fr)
- CIRAD (agricultural research for development): [www.cirad.fr](http://www.cirad.fr)
- Chlorofil: [www.chlorofil.fr](http://www.chlorofil.fr)
- Agricultural education in France and list of BTS certificates in the agricultural sector: [www.chlorofil.fr/diplomes-et-referentiels/formations-et-diplomes/btsa.html](http://www.chlorofil.fr/diplomes-et-referentiels/formations-et-diplomes/btsa.html)
- FNAP (French organic agriculture federation): [www.fnab.org](http://www.fnab.org)
- Fésia, 4 private *écoles d'ingénieurs* in life sciences, agriculture, the agrifood industry, and the environment: [www.fesia.org](http://www.fesia.org)
- IAVFF (French institute for agronomics, veterinary sciences, and forestry): [www.agreenium.org](http://www.agreenium.org)
- Training for jobs in agriculture, forestry, nature, and land management: [www.educagri.fr](http://www.educagri.fr)
- INRA (French national institute for agricultural research): [www.inra.fr](http://www.inra.fr)
- Young farmers: [www.jeunes-agriculteurs.fr](http://www.jeunes-agriculteurs.fr)
- French Ministry of Agriculture, Agrifood, and Forests: <http://agriculture.gouv.fr/EnseignementAgricole>
- GLEN: <http://glen-europe.org>
- *Salon de l'agriculture*: [www.salon-agriculture.com](http://www.salon-agriculture.com)
- UNREP (national rural union for education and promotion): [www.maformationagricole.com](http://www.maformationagricole.com)

#### CHOOSE YOUR PROGRAM

- Campus France program catalogue: [www.campusfrance.org](http://www.campusfrance.org)>Trouvez votre formation
- Catalogue of programs taught in English: [www.campusfrance.org](http://www.campusfrance.org)>Programs Taught in English
- Catalogue of short academic programs and language courses: [www.coursdete.campusfrance.org](http://www.coursdete.campusfrance.org)
- CampusBourses, financing your studies in France: [www.campusfrance.org](http://www.campusfrance.org)>Financez vos études

## Licence level

### Brevet de Technicien Supérieur Agricole (BTSA, agricultural technician certificate) (Secondary diploma + 2 years of higher education) – L2

The BTSA is offered in private and public secondary schools. **16 BTSA concentrations (options) are available:**

- **Production:** agronomics; crop production; analysis, management, and strategy of farm businesses; aquaculture; agricultural development in hot regions; animal production; horticultural production; viticulture-enology.
- **Agro-machinery:** agricultural machinery technician training.
- **Processing of agricultural products:** agricultural, biological, and biotechnological analyses; food sciences and technologies.
- **Agribusiness and agri-supply:** technical/commercial training.
- **Services and consulting:** rural development and planning.
- **Planning:** landscaping; forest management; nature management and protection; water management.

The **Brevet de Technicien Supérieur Maritime (BTSM, maritime technician certificate)** in **fisheries and marine environment management** is offered by the Lycée Professionnel Maritime Paul Bousquet in Sète and Boulogne-sur-mer.

- [www.campusfrance.org](http://www.campusfrance.org)>Espace documentaire>Offre de formation>Fiches diplômes>BTSA

### Professional licences

#### (Secondary diploma + 3 years of higher education) - L2 +1 year

Three academic programs in agriculture are available:

- **Law, economics, management** (distribution, agribusiness), commerce (consulting for members of livestock cooperatives, marketing and international export of French wines), and agribusiness law;
  - **Social sciences and humanities** in agronomy (sustainable agriculture and environmental certification), landscaping (parks, gardens, green areas, sports fields), and land planning (development and management of natural areas);
  - **Sciences, technologies, health** in agronomy (organic agriculture, sustainable resource management), animal products (consulting jobs in livestock, technical-commercial jobs in animal nutrition), crop production (crop protection techniques and plant technologies), maintenance of agro-machinery, biotechnologies.
- [www.campusfrance.org](http://www.campusfrance.org)>Trouvez votre formation>Licence

### Bachelor of sciences

#### (Secondary diploma + 2 years of higher education) – L3

The **Bachelor of Sciences European Engineer Degree "Animal Products, Crop Products, International Agribusiness"** is offered in English by the École Supérieure d'Agriculture d'Angers in partnership with the Université Agricole de Dronten (Netherlands).

- [www.groupe-esa.com](http://www.groupe-esa.com)>Formation>Bac+3 & 4

## Master level

### Master

#### (Secondary diploma + 5 years of higher education) – M2

Several academic programs offer a Master with concentrations (*mentions et spécialités*) in the environment:

- **Sciences of the environment, land, and the economy** with the following concentrations: planning, energy and land ecology, risk governance, sustainable construction, green construction, ecosystems, marine environment, tourism, arctic studies, health, functional ecology, ecological modeling, environmental toxicology, sciences of industrial and urban environments, etc.
  - **Life and environmental sciences and technologies:** risks of biocontaminants in human and animal food, engineering of products and processes, toxicology and health, biodiversity, continental environments and hydrosocieties, tropical ecosystems management.
  - **Sciences, technologies, health:** industrial environment, environmental engineering, ecology, sustainable development, risks, expertise, health/safety, naval environment, etc.
  - **Law, economics and management** with the following concentrations: chemical pollutants, geological engineering, heritage, management, quality, safety, energy, construction, sustainable development.
  - **Humanities and social sciences:** environmental projects, geomatics, sustainable development, social responsibility, archeology and environment, paleoenvironment, Mediterranean and African environments, etc.
- [www.campusfrance.org](http://www.campusfrance.org)>Trouvez votre formation>Master

Programs at Engineering Schools (Écoles d'ingénieurs) are taught in English:

- **Engineering sciences:**
    - *MAN-IMAL: transdisciplinary management of global health and nutritional safety:* [www.man-imal.fr/en/](http://www.man-imal.fr/en/)
- [www.campusfrance.org](http://www.campusfrance.org)>Trouvez votre formation>Catalogues>Programs taught in English

### Master of Sciences in management (MSc)

#### (Secondary diploma + 5 years of higher education) – M2

Programs at Engineering Schools (Écoles d'ingénieurs) are taught in English:

- Agribusiness – Agroecology: [www.groupe-esa.com](http://www.groupe-esa.com)>Formation>Bac +5
  - Agroecology - organic agriculture: ISARA Lyon
    - [www.agroecology.fr](http://www.agroecology.fr)
  - Viticulture, Enology: SupAgro Montpellier:
    - [www.supagro.fr](http://www.supagro.fr)
- [www.campusfrance.org](http://www.campusfrance.org)>Trouvez votre formation>Catalogues>Programs Taught in English

### Diplôme d'ingénieur (engineering degree) / Master (Secondary diploma + 5 years of higher education) – M2

Below are French institutions sponsored by the Ministry of Agriculture that offer agricultural engineering degrees accredited by the CTI (Commission des Titres d'Ingénieur):

- Agrocampus Ouest: Institut national supérieur des sciences agronomiques, agroalimentaires, horticoles et du paysage
    - [www.agrocampus-ouest.fr](http://www.agrocampus-ouest.fr)
  - AgroParisTech: Institut des sciences et industries du vivant et de l'environnement • [www.agroparistech.fr](http://www.agroparistech.fr)
  - Agrosup Dijon: Institut national supérieur des sciences agronomiques, de l'alimentation et de l'environnement • [www.agrosupdijon.fr](http://www.agrosupdijon.fr)
  - Bordeaux Sciences Agro: École nationale supérieure des sciences agronomiques de Bordeaux-Aquitaine • [www.agro-bordeaux.fr](http://www.agro-bordeaux.fr)
  - ENGEES: École nationale du génie de l'eau et de l'environnement de Strasbourg • [www.engees.unistra.fr](http://www.engees.unistra.fr)
  - ENSAIA: École nationale supérieure d'agronomie et des industries alimentaires • <http://ensaia.univ-lorraine.fr>
  - INPT-ENSAT: École nationale supérieure agronomique de Toulouse
    - [www.ensat.fr](http://www.ensat.fr)
  - Montpellier SupAgro: Institut national d'études supérieures agronomiques de Montpellier • [www.supagro.fr](http://www.supagro.fr)
  - ONIRIS: École nationale vétérinaire, agroalimentaire et alimentation Nantes Atlantique • [www.oniris-nantes.fr](http://www.oniris-nantes.fr)
  - El Purpan: École d'ingénieurs de Purpan • [www.purpan.fr](http://www.purpan.fr)
  - ESA - École supérieure d'agriculture d'Angers • [www.groupe-esa.com](http://www.groupe-esa.com)
  - ESB: École supérieure du bois • [www.ecoledubois.fr](http://www.ecoledubois.fr)
  - ESITPA: École d'ingénieurs en agriculture • [www.esitpa.org](http://www.esitpa.org)
  - IAMM Institut agronomique méditerranéen de Montpellier [www.iamm.fr](http://www.iamm.fr)
  - Institut Polytechnique LaSalle Beauvais • [www.lasalle-beauvais.fr](http://www.lasalle-beauvais.fr)
  - ISA Lille: Institut supérieur d'agriculture de Lille • [www.isa-lille.fr](http://www.isa-lille.fr)
  - ISARA-Lyon Institut supérieur d'agriculture de Rhône-Alpes
    - [www.isara.fr](http://www.isara.fr)
  - VetAgroSup: Institut d'enseignement supérieur et de recherche en alimentation, santé animale, sciences agronomiques et de l'environnement • [www.vetagro-sup.fr](http://www.vetagro-sup.fr)
- [www.cti-commission.fr/Liste-officielle-des-programmes-d-](http://www.cti-commission.fr/Liste-officielle-des-programmes-d-)

## Beyond the master level

### Mastère Spécialisé (MS, specialized master) (M2 +1 year of higher education) – post-M

Labeled by the Conférence des Grandes Écoles, the *Mastère Spécialisé* program enables students to earn an institutional credential attesting to dual competence in specialized areas of Environmental studies (French and/or English).

- [www.campusfrance.org](http://www.campusfrance.org)>Espace documentaire>Fiches diplômes>MS
- List of MS programs: [www.cge.asso.fr/nos-labels/ms](http://www.cge.asso.fr/nos-labels/ms)