

**Kick-Off Meeting**

**Tallinn  
18-19 February 2019**

**New Curricula in  
Precision Agriculture  
Using GIS Technologies  
and Sensing Data**

**ECOLE NATIONALE SUPERIEURE AGRONOMIQUE  
(ENSA, ALGIERS)  
SOIL SCIENCE DEPARTMENT**



Co-funded by the  
Erasmus+ Programme  
of the European Union

Joint Project: Capacity Building in the Field of  
Higher Education ERASMUS+ 2018

**Dr. Laribi Abdelkader**

# School Profile: Short History; Facts & Figures

## 1- Short History

- › **1905:** CREATION OF THE ALGERIAN AGRICULTURAL SCHOOL
- › **1921:** CREATION OF THE AGRICULTURAL INSTITUTE OF ALGERIA (INA)
- › **1930:** RADIATION OF THE AIA ON THE MEDITERRANEAN BASIN
- › **1939-1940:** SOME REFORMS
- › **1941-1942:** THE DURATION OF STUDIES IS EXPECTED TO 3 YEARS
- › **1946:** BIRTH OF THE NATIONAL AGRICULTURE SCHOOL OF ALGIERS



# School Profile: Short History; Facts & Figures

## 1- Short History

- **1957-1958:** CREATION OF THE HIGHER SCHOOL OF AFRICAN AGRICULTURE (ESAA)
- **1961:** CHANGE OF NAME TO THE HIGH NATIONAL SCHOOL OF AGRONOMY (ENSA) OF ALGIERS
- **1962:** RETURN TO THE NAME AGRICULTURAL INSTITUTE OF ALGERIA (INA)
- **1968:** BIRTH OF THE NATIONAL AGRONOMIC INSTITUTE (INA)
- **2003:** INTEGRATION AND APPLICATION OF THE L-M-D SYSTEM OF BOLOGNE
- **RETURN** TO THE NAME OF THE HIGH NATIONAL SCHOOL OF AGRONOMY (ENSA)



# School Profile: Short History; Facts & Figures

## School Profile

10 Departments

9 Scientific Research Laboratories

150 Teacher- Researchers

1700 Students (2018)

62 ha of land

The School has trained more than 9000 Engineers,  
1500 Master of Science, and 400 Doctors

**84%** of foreign graduates come from Africa, **13%** from Europe, and **3%**  
from the Middle East



# School Profile: **Departments**

**Department of Botany: Phytopathology**

**Department of Rural Economy: Agribusiness Management and Agricultural and Rural Economics.**

**Forestry Department: Forestry and Nature Conservation.**

**Department of Rural Engineering: Agricultural Hydraulics and Agricultural Machinery and Agro-equipment.**

**Department of Soil Science.**

**Department of Food Technology: Agribusiness Technology and Food and Human Nutrition.**

**Department of Animal production.**

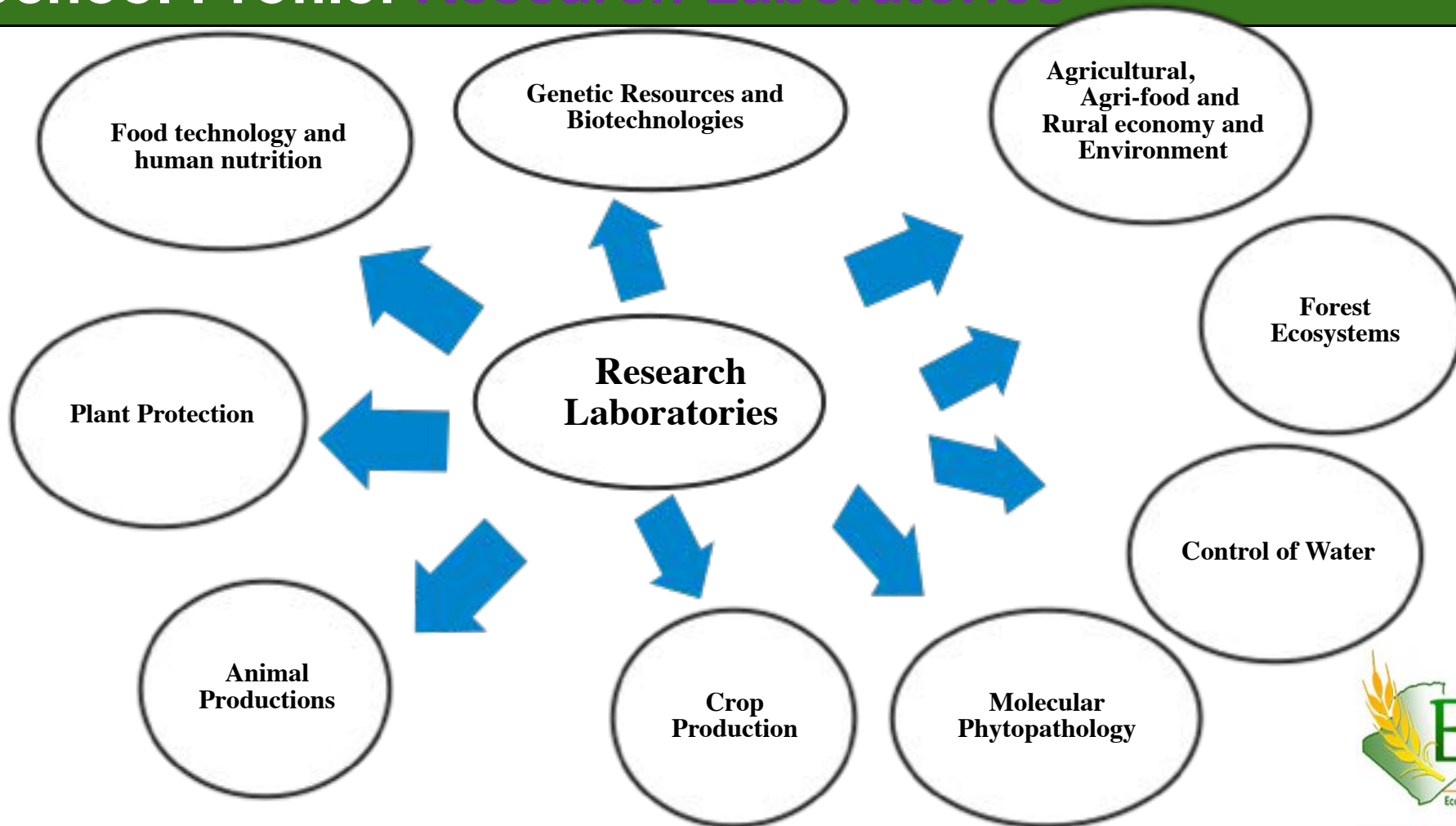
**Department of Plant Production.**

**Department of Agricultural and Forest Zoology: Plant Protection and Agricultural and Forest Entomology.**

**Department of Preparatory Classes: provide common core courses.**



# School Profile: **Research Laboratories**



# School Profile: **Some International Project**

## **INTERNATIONAL RESEARCH PROJECT (2013-2018)**

### ➤ **Projet CMEP-Tassili (Algérien-French)**

Integrative improvement of dietary legumes

Research on fusariotoxins in cereals in Algeria

### ➤ **Bilateral Cooperation Project ENSA / Sweden**

Evolutionary conservation biology of the Euphrates Poplar

### ➤ **Arimnet Project**

Sustainable and Efficient Mediterranean farming systems: Improving Agriculture Resilience through Irrigation and Diversification (SEMIARID)



# School Profile: **Some International Project**

## **INTERNATIONAL RESEARCH PROJECT (2013-2018)**

> **Tempus Project**



**Quality in Agronomic Higher Education in the Mediterranean (QESAMED)**

> **Erasmus+**



**Quality in Higher Education for Renewable Energy in North and West Africa (AFREQEN)**

> **The school is currently participating in the development of several Prima project (2019-2020)**



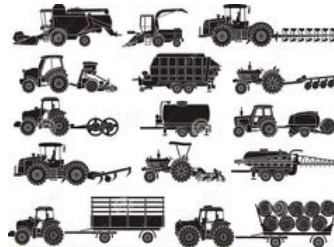


# BA/MA Programs Offered by the Department of Rural Engineering

Department of Rural Engineering realizes Engineers, Master and PhD programs in the two following specialties:

## Farm Machinery and Agricultural Equipment

Engineering Sciences and Techniques



## Agricultural Hydraulics

Agricultural water Management

Water quality

Irrigation

Drainage

# BA/MA Programs Offered by the Department of Rural Engineering

Some subjects studied in the specialties

## «Farm Machinery and Equipment », enrollment-2018

- Rural construction
- Materials resistance
- Tractor
- Engine
- Electronic (could be upgraded)
- Electrical (could be upgraded)
- Industrial drawing
- Automatism (could be upgraded)
- Energy in Agriculture
- Mechanics technology
- Machine elements
- Farm machine
- Livestock Mechanization (could be upgraded)

## «Agricultural Hydraulics», enrollment- 2018

- Aerial Photointerpretation and Remote sensing (30 h) (could be upgraded)
- Geographic Information System (could be upgraded)
- General Hydraulics
- Subterranean Hydraulics
- Drainage
- Hydrology
- Geostatistic Topography
- Soil physics
- Soil Plant Atmosphere Continuum (SPAC)
- Irrigation project
- Irrigation Management
- Water and soil conservation

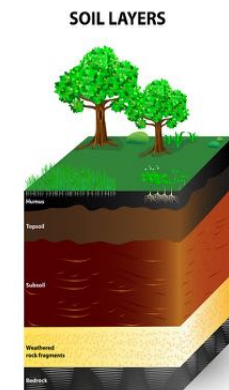
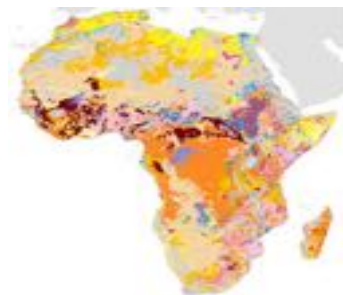
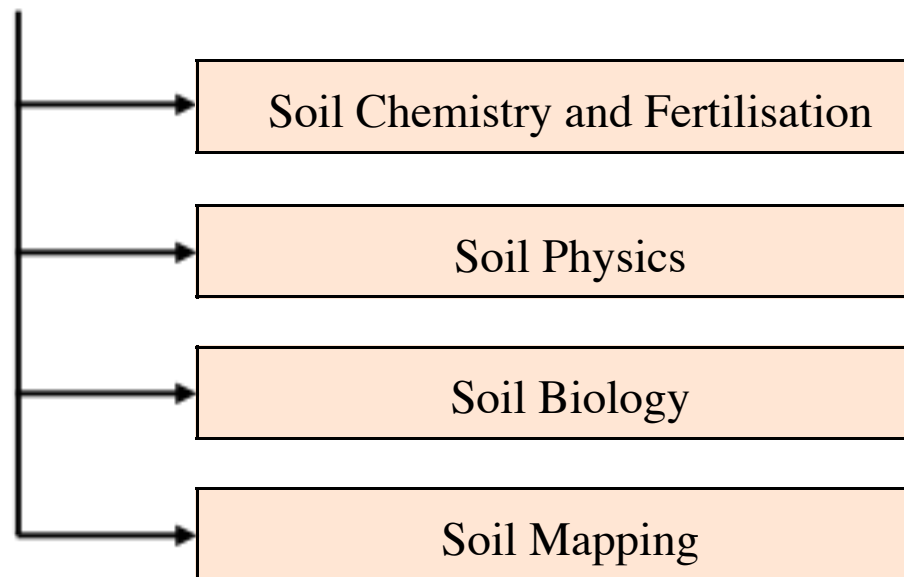
# BA/MA Programs Offered by the Department of Soil Science

Department of **Soil Science** realizes Engineers, Master and PhD programs. We deliver two diploma:

Master in Soil, Protection and Land Use Planning



Engineer in Soil Science



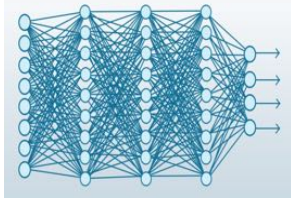
# BA/MA Programs Offered by the Department of Soil Science

Some subjects studied in the Soil Science Department

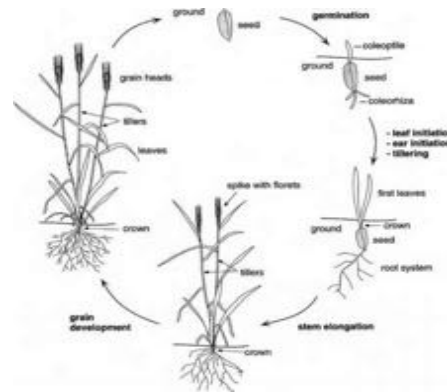
- **Aerial Photointerpretation and Remote sensing (45 h)** → **Could be upgraded**
- **Introduction to Soil Science**
- **Water and Soil conservation**
- **Pedology, Land Use Planning and Geomatics**
- **Soil Mapping**
- **Hydrogeology**
- **Micromorphology**
- **Geology**
- **Soil Mineralogy**
- **Soil Morphology and Classification**
- **Pedogenesis**

# New Curricula/Modules for BA/MA Programs

➤ Machine Learning



➤ Robotics



➤ Basics of the Precision agriculture –characteristics, technologies, economic efficiency, optimal use of resources

➤ Application of Precision Agriculture for crops growing.

➤ Using of SENTINEL1-2-3 imagery for agricultural field monitoring



# Work Group of the Project CUPAGIS (Proposal)



		Salim ETSOURI	Karim LAABASSI	Abdelkader LARIBI	Réda DELLI	Lies BOUDHAR	Nadjat BENKHERBACHE
Position in university		Teacher in Rural Engineering, Farm Machinery and Agricultural Equipment	Teacher in Rural Engineering, Farm Machinery and Agricultural Equipment	Teacher in Soil Science	Teacher in Agricultural Hydraulics, Rural Engineering	Teacher in Rural Engineering, Farm Machinery and Agricultural Equipment	Teacher in plant production
Responsibility (Work)	1.1	X	X	X	X	X	X
	1.2						X
	2.1	X	X	X	X	X	X
	2.2	X	X	X			X
	2.3	X	X	X	X	X	X
	2.4	X	X				
	2.5			X	X		
	2.6	X	X	X	X	X	X
	3.1			X			X

## Work Group of the Project CUPAGIS: **Team Photo**







Thank you for you attention!



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