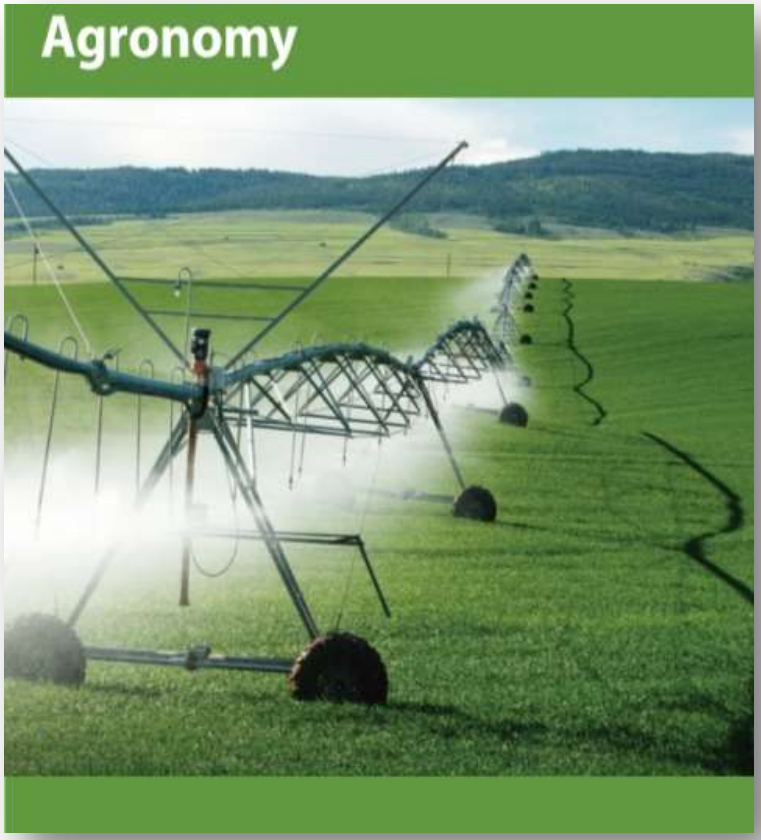
الجمهورية الجزائرية الديمقراطية الشعبية
People's Democratic Republic of Algeria
وزارة التعليم العالي والبحث العلمي
Ministry of higher education and scientific research
معهد علوم الطبيعة والحياة
Nature and Life Sciences Institute
قسم العلوم البيولوجية والفلاحية
Department of Biological and Agricultural Sciences



Agronomy II – Plant Part

Dr. Y. Torche

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Course Sheet

- **Course:** Agronomy II – Plant Part
- **Teaching Unit:** Fundamental UE 1
- **Semester: 4th Semester**
  - Credits: 04
  - Coefficient: 02
- **Target student**
  - **2nd grade license, Common Core in Agricultural Sciences**
- **Weekly Teaching Hours:**
  - 1h30 Lecture (14 weeks)
  - One to two Field trip and one practical work.
- **Assessment: Continuous evaluation, Final exam**
- **For any information, you can contact the course coordinator:**
  - **By email:** torche.yacine@yahoo.fr
  - **At the SNV Institute on Sundays from 11:00 AM to 12:00 PM**

Course Objectives and prerequisites

☞ *Objectives*

By the end of this module, students should be able to:

- Understand crop rotation, cropping systems, and plant-microflora interactions.
- Identify seed types, characteristics, and preparation methods.
- Describe the plant growth cycle and cropping cycle.
- Apply best practices for crop management, soil preparation, and crop establishment.
- Analyze factors affecting crop yield and implement strategies for improvement.
- Implement fertilization, weed control, and pest management techniques.
- Understand harvesting methods and post-harvest considerations.
- Differentiate between soil amendments and mineral fertilizers for optimal plant nutrition.

☞ ***Prerequisites*** *These foundational concepts will help students grasp the principles of plant cultivation, management, and production.*

- **Basic Botany**: Plant anatomy, physiology, and classification.
- **Soil Science**: Soil composition, structure, and fertility.
- **Plant Physiology**: Growth stages, photosynthesis, nutrient uptake, and water relations.
- **Microbiology**: Plant-microbe interactions, including symbiosis and soil microbiota.
- **Agronomy Basics**: Cropping systems, seed selection, and cultivation techniques.
- **Pest and Disease Management**: Identification and control methods.
- **Fertilization Principles**: Types of fertilizers, soil amendments, and nutrient management.

Part 2: Plant

I. Agricultural Plants

1. Relationships between cultivated plants: crop rotation and cropping systems
2. Seeds: (Classification, Morphology and Physiology, Qualities of a good seed, Seed preparation)
3. The plant growth cycle: (Main growth stages: germination, active growth, flowering, fruiting, maturation)
4. The cropping cycle
5. Nutritional associations between plants and microflora

II. Cultivated Plants in Their Environment

1. Crop management
2. Crop yield and its components
3. Soil preparation
4. Crop establishment

III. Main Crop Care Practices

a. Fertilization
b. Weed control
c. Pest and disease control

4. Harvesting

5. Fertilization

a. General concepts
b. Soil amendments
c. Mineral fertilizers