



Periodical Report
6 Months of project
implementation

New Curricula in
Precision Agriculture
Using GIS Technologies
and Sensing Data

University of Oran¹ Ahmed Ben Bella
Fac. Life/Nature Sciences / Fac. App/Exact Sciences



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

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

Prof. Smain Balaska
University Oran¹, Algeria

Internal Work plan

- Communication and dissemination of project activities inside and outside Oran1 university
- Analyze the Algerian requirements in precision agriculture and design a first questionnaire
- Development and vulgarization at a local scale of the main courses in precision agriculture
- Development of a detailed content of each course for the bachelor training in precision agriculture
- Quality assurance
- Launching PASSENSO

Work group

Smain Balaska (Head)

Ahmed Bahri

Moulay Belkhodja

Noureddine Benaissa

Sid-Ahmed Chawki Lamara

Ahmed Hamou

Yahia Lebbah

Mejdi Kaddour

Mohamed Sayah

Asmaa Achour

Noureddine Aribi

Réda Bentata

Miloud Dahane

Fatma Zohra Haddad

Mohammed Amine Mami

Courses to update

Biology

1. FERTILISATION
2. PHYTODIAGNOSIS and PHYTOPROTECTION
3. SALTS SOILS
4. AGRICULTURAL MECHANIZATION TECHNOLOGY
5. PLANT IRRIGATION TECHNOLOGY
6. VEGETABLE PRODUCTION
7. SOILS and POLLUTIONS
8. WATER AND WATER NUTRITION OF PLANTS
9. PEDOLOGY

Computer Science

1. Network Architecture
2. Data Analysis
3. Cellular Network
4. Real-time embedded systems
5. Image Processing / Image and Applications
6. Mobile Robotics

Criteria for teacher selection for trainings

- Academic degree: assistant lecturer (MAA in Algeria)
- Knowledge of English: at least B2 English level
- Experience of teaching: at least 5 years teaching
- Formal engagement to teach in the future precision agriculture curricula at Oran1
- Basic academic or professional skills in the intended course (detailed content of the EU partner course)

Process of teacher's preparation: The teachers going to EU training are all involved in WP2 (see attached file "Q1-Working-Packages-Plan.doc") focused on the development of the new curricula. Moreover, in WP2, teachers are involved in a sub-work-package detailing technical aspects of all of the main courses in PA.

Teacher that will develop new courses

- **Acquisition, satellite, remote sensing, GPS:** Nouredine Aribi, Yahia Lebbah, Kaddour Mejdj
- **GIS, images processing and vision:** Nouredine Benaissa, Mohamed Sayah, Réda Bentata, Mohammed Amine Mami
- **Agriculture, Biology and Precision Agriculture:** Moulay Belkhodja, Sid-Ahmed Chawki Lamara, Fatma Zohra Haddad, Nouredine Benaissa, Asmaa Achour

Equipment & Software

Hardware

Head: Miloud Dahane

Team: Miloud Dahane, Moulay Belkhodja, Nouredine Benaissa

Objective: The team should manage the hardware equipments of the project. It will particularly consolidate the hardware needs of the courses in PA.

Software

Head: Nouredine Aribi

Team: Nouredine Aribi, Yahia Lebbah, Mejdi Kaddour

Objective: Manage softwares of the project.

Dissemination plan

- Facebook page
<https://www.facebook.com/Cupagis-Oran1-University-454383688459311>
<https://www.facebook.com/universite.oran.algerie>
- Conduct a dissemination meetings for students, teachers and administrative staff of the University
- CUPAGIS Website under construction - hosted at www.univ-oran1.dz
- Infodays for Precision Agriculture (12/2019, 2020)

Schedule of dissemination events

1. Publication of the main meetings of Oran1 working group
<https://www.facebook.com/universite.oran.algerie>
2. An Infoday event “CUPAGIS project and Precision Agriculture” is planned “end septembre” 2019, where students, teachers and administrative of the two engaged faculties (Faculty of Life and Nature Sciences and Faculty of Exact and Applied Sciences) are invited.
3. A one-day-workshop event “Precision Agriculture: Applications and Technologies” is under discussion and planned 2019 december.
4. A one-day-workshop event “Precision Agriculture: GIS and Remote Sensing” is under discussion and planned 2020 first semester.

Non-consortium organizations

- IHFR (Hydrometeorological Institute of Training and Research)
- CFPA Misserghin (Agricultural Training Center)
- CFPA Hassi-Bounif (Agricultural Training Center)
- ASAL (Algerian Space Agency)
- ITCM Hassi-Bounif (Technical Institute of Vegetable Crops)
- Chambre d'Agriculture d'Oran (Oran Agriculture Center)
- DSA Oran (Agricultural Services Management of the District of Oran)
- DSA Ain-Témouchent (Agricultural Services Management of the District of Ait-Témouchent)
- INPV (National Plant Protection Institute = Regional Plant Protection Station)
- ITGC (Institute of Field Crops of Sidi Bel Abbès)
- INRA de Sidi Bel Abbès (National Institute of Agronomic Research)
- SRPV (Regional Plant Protection Services)
- I.T.M.A.S (The institute of specialized agricultural middle technology)
- CDTA (Center for Advanced Technology Development)
- CNA (National Agricultural Center)
- INCT (National Institute of Cartography & Remote Sensing)
- CRAAG (Research Center in Astronomy, Astrophysics and Geophysics)

Implemented dissemination activities

- Visits :
 - Hydrometeorological Institute of Training and Research (IHFR)
 - Agricultural Professional training centers (Hassi Bounif, Messerghine)
- Publication in Oran1 university newsletter
- Publication in Oran1 university facebook
 - <https://www.facebook.com/universite.oran.algerie/posts/2725731797456614>
 - <https://www.facebook.com/universite.oran.algerie/posts/2712027628827031>
 - <https://www.facebook.com/universite.oran.algerie/posts/2698721210157673>
 - <https://www.facebook.com/universite.oran.algerie/posts/2694532877243173>
 - <https://www.facebook.com/universite.oran.algerie/posts/2634518099911318>
 - <https://www.facebook.com/universite.oran.algerie/posts/2587723081257487>
 - <https://www.facebook.com/universite.oran.algerie/posts/255840377522751>
 - <https://www.facebook.com/universite.oran.algerie/posts/2521706237859172>
 - <https://www.facebook.com/universite.oran.algerie/posts/2515419261821203>
 - <https://www.facebook.com/universite.oran.algerie/posts/2494976413865488>
- Posts in the Oran1 university Twitter account

Questionnaire for students

- We are working to finalize two questionnaires, one for students/teachers/administratives at Oran1 university, and the second for external organizations and potential employers.
- We have thoroughly used the questionnaire sent by ECM EU Academy 02/06/2019.

Quality Assurance Plan

- We are in the process of managing QA with Trello open software. The details are given in the slides “Q11-Software to manage QA.pptx”.
- Current questionnaire in French is given in file “Q11-Ongoing non final questionnaire French.docx”.
We are doing the best to finalize it.

PASENSO

Key points of Pasenso issues:

Institutional side :

1. Thinking on the development of the agricultural market in Algeria.
2. Coordination and cooperation between Algerian and European agricultural professionals.
3. Data collection office for precision agriculture.

Coaching side :

1. Bring Algerian higher education institutions closer to the agriculture labour market (employability).
2. Use of the new innovative teaching tools for the precision agriculture and their integration in the agriculture labour.
3. A new laboratory equipped for the precision agriculture labour.
4. A virtual classroom (VCR) for precision agriculture consulting.

Market side :

1. Status of existing agriculture institutions.
2. Identify the techniques, tools and methods used in agriculture labour.
3. How about the integration of the precision in the agriculture labour.

Communication

- 18/10/2018: First national meeting at Oran1 to discuss how to launch CUPAGIS project.
- 25/10/2018: Second national meeting at Oran1 to discuss how to launch CUPAGIS project.
- 20/02/2019: After the kick-off meeting, we have gathered the working group to launch the CUPAGIS project in Oran1 university.
- 28/02/2019: We have fixed the working-groups, and in particular the working-group working on new courses.
- 24/03/2019: Regular local meeting to develop the details of working-packages.
- 11/06/2019: NEO national meeting at Oran1.
- 13/06/2019: First local meeting to write the first 6-months report on implementation of the CUPAGIS project.
- 20/06/2019: National meeting at Mostaganem to discuss the first 6-months report.
- 27/06/2019: Last local meeting to finalize the details of the 6-months report.

Additional information

For expenses related to travel (flight tickets) and accommodations (hotel and living expenses) of participants in meetings and training workshops, we request that the budget devoted to these expenses be managed completely by host EU university.



Thank you for you attention!



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

Prof. Smain Balaska
University Oran1, Algeria
sbalaska@yahoo.com