

Internships trips as a complement to the teachings in the degree of agro-environmental engineering

Augusto Arce (1), Maria Teresa Castellanos (1), Ana Maria Tarquis (2), and Maria Carmen Cartagena (1) (1) Dpto. de Química y Tecnología de Alimentos. E.T.S.I.A.A.B. Universidad Politécnica de Madrid (UPM), (2) Dpto. de Matemática Aplicada E.T.S.I.A.A.B. UPM

In the School of Agronomic, Food and Biosystems Engineering of the Polytechnic University of Madrid, the teachings of the Agro environmental Engineering degree have a very important practical component, which includes laboratory practices and field visits, both essential for the acquisition of the competences that the student must acquire in the different subjects that constitute the degree.

In order to complement the training of the students and the acquisition of some of these competences, in recent years, five-day internships have been scheduled for different areas of Spain, including visits to study the problems of:

- Shortage of water resources and contamination by agricultural uses.

- Obtaining Biofuels from seeds and agricultural residues.

- Obtaining fertilizers with minimization of emissions and waste treatment.

- Mining areas in which the student can understand the processes of obtaining metals and also sulfuric acid with the consequent problems including the possibility of environmental accidents.

- Obtaining clean renewable energy.

- Strawberry production with the agronomic implications and particularly the management of water use through the irrigation community.

The environmental aspects of the Internships trip related to water resources, production of raw materials and energy and pollution have been described, but this trip was also complemented with studies of soils, fauna and flora of great agro-environmental interest.

Finally, we affirm that we are absolutely convinced that this type of scheduled internship trips represent an important support for the acquisition of skills and competences for students of the degree in Agro-environmental Engineering.