REPORT

Conference

EDUCATION IN AGROFORESTRY : Building today's and tomorrow's agriculture

Final conference of the EU project AgroFE

Wednesday 9 December 2015
13.00 - 15.00
Brussels, European Parliament, Room PHS 4B001

Chaired by Ricardo Serrão Santos, Member of the European Parliament

With the support of Paul Brannen, Member of the European Parliament

- **Opening remarks**
  By Ricardo Serrão Santos, Member of the European Parliament

Mr Serrão Santos recalled that agroforestry is an ancient practice. Two of the best examples are the Spanish Dehesa and the Portuguese Montado. The challenge is not only to preserve these areas but also to plant trees and hedges on existing agricultural land.

Furthermore, Mr Serrão Santos underlined the multiple benefits of agroforestry: increasing carbon sequestration, curbing soil erosion, improving land resilience, nutrient fixation and biodiversity and enhancing productivity in the medium and long term. Consequently, agroforestry plays a key role in addressing climate change. Although the Common Agricultural Policy (CAP) 2014-2020 brought new incentives for the development of agroforestry systems, it is essential to establish and maintain a constant dialogue between the scientific and agricultural world. "Thanks to the organisation of targeted education actions, the AgroFE project enables to make the link between these two worlds," stated Mr Serrão Santos.

Conference organised by AliénorEU
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- **AgroFE Project: Building the agroforestry education at the EU level**
  By Charles Burriel, Professor at AgroSup-Eduter Dijon, EU project coordinator

Professor Burriel explained that agroforestry had been gradually abandoned after the Second World War due to the development of large-scale machinery, the petroleum industry, pesticides and the regrouping of lands amongst other factors. It is applied again mainly thanks to its significant environmental and economic benefits.

Launched in 2013, the EU project AgroFE involved 13 partners coming from 6 countries, namely France, Belgium, UK, Hungary, Czech Republic and Romania. As the effective development of agroforestry and its ownership require notably that all the professionals (farmers and future farmers, students, advisors and tutors) are well informed, trained and advised, the project aimed at building an education system in agroforestry thanks to the use of new technologies and the involvement of all professionals.

The AgroFE project established a training system adapted to the specificities of the six countries concerned and integrated in existing or new courses. Trainings were developed on the basis of a common education framework created by the project. Professor Burriel welcomed the fact that some countries had decided to keep developing these trainings in the future. For example, the French government committed to integrate agroforestry in the official training programs.

Professor Burriel shed light on the three main achievements of the project:

- A book of professional reference for agroforestry practitioners that outlines the activities that those people should be able to perform.
- The organization of 14 training sessions that allowed to train over 300 people.
- A DVD to transfer the knowledge and the method to new actors.

Moreover, Professor Burriel explained that agroforestry is a key element of the greening under the CAP. It is essential to have the support of European policy-makers in order to give a boost to the education in agroforestry of the agricultural stakeholders. "A pilot project or any other EU initiative would make sustainable the efforts already made in this area and would allow to cover all European countries," concluded Professor Burriel.

- **The professional referential for agroforestry practitioners : a fundamental tool for education**
  By Stephen Briggs, BSc&MSc, Farmer - Agroforester, ABACUS founder

Mr Briggs explained that "further development in agroforestry requires adequate skills and skills development requires training." The AgroFE project developed a framework for trainings in agroforestry, some materials and a database.
Farmers and future farmers, land managers, students, technicians, agronomists and tutors benefited from trainings.

Innovative and more traditional training methods were introduced by the AgroFE project: traditional class rooms for students, online multi-country lectures, undertaken work place training, multiple workshops, case studies and field trips. The use of new technologies was well received. One of the major achievements of the AgroFE project is the establishment of a book of professional reference for agroforestry practitioners.

Mr Briggs echoed to Professor Burriel's words regarding the important support of the European Union to optimize the benefits of the project. He ended by informing the participants that the work undertaken under AgroFE will continue with the project Agrof-MM that will focus on the Mediterranean and mountainous areas.

- **Development perspectives for agroforestry in Europe**
  By Maria Rosa Mosquera Losada, President of the European Agroforestry Federation (EURAF)

Professor Mosquera Losada recalled that the main European agricultural goal is increasing food production in a sustainable way. Agroforestry has been recognised as one of the best tools leading to ecological intensification at both ground and below level. For instance, agroforestry enables to increase the use of solar radiation for crops and to reach a better biomass production. Professor Mosquera Losada added that agroforestry contributes to increasing biodiversity per unit of land. The well-known Montado and Dehesa areas would have been a desert if there had been no trees. Another positive effect of agroforestry is reducing nutrient contamination. Trees are indeed able to absorb nutrients and recycle them. The last example of the environmental benefits provided by agroforestry is climate change mitigation since trees are natural carbon sinks.

Professor Mosquera Losada identified three agroforestry practices developed in Europe:

- The most common agroforestry practice is silvo-pastoralism, i.e trees and animal production. It represents 20 million hectares, mainly in Sweden, Finland, Spain, Italy and France.
- Silvo-arable practices, i.e trees mixed with annual or perennial crops. It represents around 400.000 hectares mainly in the South of Europe.

- Kitchengardens, i.e trees and vegetable production in urban or peri-urban areas. They cover 1.8 million hectares.

Because of its benefits, agroforestry could be more widely practiced in Europe. To reverse the trend, Professor Mosquera Losada called for the adoption of a European Agroforestry Strategy on the same model as US and more recently India and Brazil. Promotion through the CAP, education and the development of innovation is needed to give a boost to agroforestry. The FAO recognised that the lack of knowledge is the main obstacle to spread agroforestry.

- **Contributions:**
  From Fabien Balaguer, French Agroforestry Association (AFAF), on the role of local stakeholders in the development of agroforestry

Agroforestry is a cross-cutting issue which is linked to food, soil, climate and biodiversity etc. Mr Balaguer quoted the Environment Minister of Mauritania who had said at the COP21 that "when you invest 1 Euro in agroforestry, you get 13 Euros for the society not only in terms of benefits and production of resources but also thanks to the savings you make, i.e less money to fight soil erosion and water pollution etc".
Mr Balaguer explained that many people have a restrictive vision of agroforestry by only referring to alley cropping. In reality, agroforestry is much broader and is designed to better manage territories and make an optimal use of natural resources. He underlined the importance of developing a territorial approach and connecting all relevant players such as farmers, technicians and hunters etc. In France, there is a growing request to establish agroforestry practices. Unfortunately, financial help and technical expertise are lacking. In 50% of the regions, there is no structure offering this technical expertise.

Mr Balaguer presented the Agr'eau project in the Adour-Garonne basin located in the South-West of France. The goal of this project, set up by the French Agroforestry Association in partnership with many institutional players - Chambers of agriculture, regional Councils, Water Agency – as well as technical ones - groups of farmers, river conservationists, road maintenance officers, hunting and angling Federations etc. -, is to reach an improved soil and water management by developing farming systems that enhance vegetation cover on agricultural lands. As a technical support program, it seeks to encourage collective innovation, educate, train, promote and transfer scientific knowledge and best practices.

Mr Balaguer concluded by stressing that the development of agroforestry requires the use of "the agriculture of conversation", which means creating networks and building projects together.

- Loïc Ottinger, Public Agricultural Education in the Aube Department (France) on the need to boost education in agroforestry

For 5 years, the Public Agricultural Education in the Aube Department worked to create a training "Advisor in agroforestry." The AgroFE project played a key role since it allowed to finalise the referential. Supported by the regional authorities, the Public Agricultural Education in the Aube Department opened the training last November. 12 people have participated so far. The training is divided into two parts: 16 weeks in a research center and 16 weeks on the ground. Trained people are put in a professional situation. They must do the diagnosis, assess the parcels concerned and provide advice. Partners like the French Agroforestry Association, Agroof, the Agricultural Chamber of the Aube Department and INRA participated in the training.
Mr Ottinger is convinced that this innovative training will continue in the future and hopes that it will inspire other departments and regions.

- Paul Burgess, Cranfield University, on the link between education and research

Dr Burgess presented the EU research project AGFORWARD (www.agforward.eu). The four year project (2014-2017) is promoting agroforestry practices in Europe that will advance rural development i.e. improved competitiveness, and social and environmental enhancement. It has established 40 groups across Europe working with about 800 farmers and other stakeholders. Michael den Herder, from the European Forest Institute, had recently led a report using a European data set called LUCAS, which provides data both on land cover and land use. This showed that trees were integrated with livestock and/or crop production on 5% of all EU land. The figure amounts to 15% of EU agricultural land.

Dr Burgess agreed that agroforestry should have a broad definition and should not be reduced to alley cropping. It includes practices such as wood pasture, grazed orchards, managed hedgerows, and woodland pigs and poultry. He noted that agroforestry was being promoted in Brazil and the USA. He indicated that a "Common Agroforestry Policy" would be one way to minimize perverse incentives to remove trees or to not integrate trees on agricultural land.

Dr Burgess concluded that research and education go hand in hand and stressed the importance of working with policy makers.

- **Discussion**

Ms Yammine (IUCN) asked whether some research had been done on the role of agroforestry in climate change adaptation and mitigation and land use. She thinks that agroforestry is not very visible in the different strategies on these issues.

Professor Mosquera Losada (EURAF) confirmed that there has been research on how much biomass is produced by trees used in agroforestry and how much carbon is sequestrated by trees. She added that the AGFORWARD project looks into the sequestration of carbon by soils. Furthermore, EURAF is member of several Civil Dialogue Groups, managed by DG Agriculture, in which the Federation is entitled to provide inputs. One of the groups is focused on environment and climate change. Professor Mosquera Losada works also with the Global Research Alliance and the collaboration is mainly focused on climate change.

Mr Briggs (ABACUS) explained that in most EU countries, there is a massive disconnection between forestry (carbon in forestry lands) and agriculture departments (carbon in agriculture). Trees within agricultural areas have been ignored.

Ms Garré (University of Liège) wondered where she can find the materials and tools developed by the AgroFE project and whether in-field applications will continue after the end of the project.

Professor Burriel (AgroSup Dijon) answered that the tools and materials will be available soon. New applications for the tablets will be developed for mountainous and Mediterranean areas under the Agrof-MM project.

As an answer to a question on future trainings to be organised in Belgium, **Mr Maus (AWAF)** informed that the next one should be organised in March. AWAF, the Agroforestry Federation for Wallonia and Brussels, is an independent organisation whose activities are carried out by volunteers. AWAF can hardly reply to all the requests. Mr Maus is waiting for a meeting with the Minister for Agriculture to see if some support can be given.

Ms Godin (DG Environment, European Commission) wondered whether some research had been done on the role of agroforestry in reducing soil erosion and improving organic matter. She also raised the question of the multiple barriers that hamper the development of agroforestry.

Mr Briggs (ABACUS) stressed that agroforestry plays a significant role in stabilising soil and reducing erosion. He gave the example of his farm where trees have positive impacts on wind erosion. With regard to the barriers, he identified two elements:

- Until 2015, trees were not recognized as an efficient land use under the CAP.
- Farmers and land managers have a low awareness on agroforestry.

Professor Burriel (AgroSup Dijon) added that the interactions between soils, crops and trees are one of the key elements of the trainings. He thinks that the ecological benefits of agroforestry should be better recognised.

Professor Mosquera Losada (EURAF) informed that in the past, the Eastern European countries used agroforestry to avoid the negative effects of the wind. Bulgaria and Romania are leading a joint project on trees for erosion reduction and water cleaning.

Mr Lawson (EURAF) pointed out that more information is available at farm level on land and soil management, carbon etc. A lot of this farm information is not available because ministries claim that it is confidential. Moreover, during the European Commission consultation on LULUCF - Land use, Land Use Change and Forestry - a few months ago, EURAF called for the integration of the emissions reporting over the land use pillars. In other words, the reporting of the emissions should not be separated between agriculture and forestry.

Mr Houška (Czech University of Life Sciences Prague) informed that the Czech work towards disseminating the agroforestry idea. It is worth noting that half of the surface of Czech lands is agricultural land and 90% of the agricultural lands are rented. It is one of the impediments for the agroforestry development in Czech Republic. It is indeed difficult for a person who rents the land to have a long term approach.

Mr Briggs (ABACUS) fully agreed with Mr Houška on the problem of the rental period length. In his view, it is imperative that the land manager has a rental period over 10 years to launch long term projects like agroforestry.

Mr De Baets (Independent environmental advisor) asked how the AgroFE project dealt with the big variety of agroforestry systems and the diversity of policies covering agroforestry.

Professor Burriel (AgroSup Dijon) stated that AgroFE defined common elements. Specific elements have been left to a lower level. The project is not designed to impose an agroforestry model but to agree on common elements.

Professor Mosquera Losada (EURAF) explained that under the AGFORWARD project, an analysis of the different agroforestry systems is being done. She agreed that simplified and less fragmented policies would help promote agroforestry.

Mr Balaguer (AFAF) pointed out that with the current agricultural practices, 90% of the lands loose organic matter. This is the reason why, it is important to combine agroforestry with new agricultural techniques (no ploughing, rotating crops etc).

To answer the question of **Mr Lapins (Permanent Representation of Latvia to the EU)**, **Dr Burgess (Cranfield University)** said that farmers can be reluctant to plant trees because of the loss of the basic farm payment.

- **Conclusions** by Paul Brannen, Member of the European Parliament

Mr Brannen highlighted that climate change should be seen not only as a threat but also as an opportunity to develop agroforestry. The floods happening in the UK have triggered a debate on the reason behind this climatic event. Climate change has been identified as the major cause. He explained that one of his Conservative opponents called to plant 2 hundred million trees to avoid a similar problem in the future. "Climate change is an amazing opportunity to win the argument about trees and agroforestry," concluded Mr Brannen.