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# **1 EURAF ACTIVITIES**

### 1.1 EURAF'S START INTO 2015

The New Year 2015 started with plenty of activities to promote agroforestry in Europe. <u>EURAF</u> will continue being linked to

1) Agroforestry education and training activities promoted by the educational project <u>AGROFE</u>, which is coordinated by Charles Burriel and effected by EURAF member Sylvie Guillerme;

2) The research and innovation activities lead by Norbert Lamersdorf within the <u>AGFORWARD</u> project, coordinated by Paul Burgess.

We highly recommend visiting the webpages of these projects to enjoy the work carried out about agroforestry and to benefit from their activities. EURAF is also leading and participating in new proposals and invites you to contact our federation or the national delegates if you are interested in participating in agroforestry proposals at international level. Nowadays, EURAF is working in the preparation of European proposals related to International European Networks for Doctorate studies, and also proposals related to knowledge transfer and innovations in Agroforestry.

Lobbying in Brussels will be again a key activity of EURAF in 2015, thanks to the activities carried out by AliènorEU and the participation of EURAF members in the different Civil Dialogue Groups, the ESIF expert group, and the meetings organized by the European Commission in Brussels, among others. EURAF is also collaborating with the European Innovation Partnership (<u>EIP</u>) from DG-AGRI, the new instrument of the European Commission to foster competitive and sustainable farming and forestry that 'achieves more and better from less'.

Finally, we are pleased to announce that the new EURAF webpage has been launched thanks to the excellent work coordinated by Joao Palma from ISA (special thanks to the designer <u>Sérgio Correia</u>). Please keep checking our webpage regularly to learn all exciting news about agroforestry during this year.

Source: <u>Rosa Mosquera</u>, EURAF President, January 2015.



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### **2 REGIONAL AGROFORESTRY NEWS**

### 2.1 AGROFORESTRY IN BULGARIA

Traditionally, in Bulgarian forestry and agriculture the successful implementation of agroforestry systems is known both for science and practice. In the past, as well as now, many researchers from the Experimental Station for fast-growing tree species - Svishtov, Forest Research Institute - Bulgarian Academy of Sciences - Sofia, Institute of Mountain Animal Husbandry and Agriculture - Troyan, Institute of Wheat and Sunflower - General Toshevo, University of Forestry - Sofia, Agricultural University - Plovdiv, etc. have been committed to the research and development of agroforestry systems.

Particular success was achieved in the implementation of *Agricultural uses of forest plantations*. Agricultural crops are being grown together with tree species either by intercropping, or by being planted in free areas prior to their scheduled afforestation. The ultimate goal of such agroforestry systems is the cultivation of the plantation and its conversion into forest.

In the 1950s began the widespread application of the *Protective forest belts* as agroforestry systems. The primary purpose of those forest belts was to reduce the adverse effects of wind, precipitation, water flows and hazardous emissions, and to improve the soil, air and ecological conditions of the surrounding lands and territories.

Please follow the link to learn further details about agroforestry in Bulgaria.

Source: <u>Dr. Vania D. Kachova</u>, Forest Research Institute, Bulgarian Academy of Sciences.

### 2.2 AGROFORESTRY IN IRELAND

There is an Irish proverb which translated to English says "what is common is not remarkable". Perhaps this best describes the position of Agroforestry in Ireland. In policy it doesn't exist but in reality it is everywhere.

In a drive through a typical Irish farmland landscape one encounters a patchwork of mainly pastured fields of 2-8 ha, each surrounded by a hedge-bank-ditch boundary of woody perennials such as Ash, Beach, Whitethorn, Blackthorn, Gorse and blackberry brier. The width of such field boundaries range from 3-6m. Their intended purpose is to provide stock-proof



fencing, drainage, shelter, browsing material, fuel wood, cover for wildlife, bird food and aesthetics. A consequence of the extent of such structures is that Ireland was recently fined €180,000,000 for over declaring its farmed area. The Irish Government responded by cutting single payments to farmers which in turn has regrettably caused farmers to remove huge amounts of woody perennials from their farms (Defined by government as overgrown hedges and scrub!).

Given this background, one can imagine the head scratching that went on when Irish negotiators at recent CAP reform dis-



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cussions were requested to encourage Agroforestry. I am sure they gave it serious consideration but reasonably decided that given the recent experience recounted above. introducing a policy to pay farmers to plant woody perennials on their fields just might appear ridiculous.

Thus there are no supports for farmers to adopt Agroforestry in Ireland. Or are there?

A number of years ago I became convinced of the benefits of agroforestry which I do not need to recite here. I set out to adopt agroforestry on my 40 ha Nicharee Farm in the South East of Ireland. It was very exposed to prevailing South Westerly winds from the sea and needed shelter. The Irish Farm Forestry incentives are quite attractive giving a planting grant that covers planting costs and an annual payment for 20 years. The minimum width of plantation allowed was 40 m. Using this

Fig. 2: The author's farm showing blocks of woodland integrated with grazed fields.



scheme, I planted broadleaf trees all around the perimeter of my farm and planted smaller blocks between fields in the centre of the farm to maximise the edge effect between grazed areas and wooded areas. Then four years ago an Agri-environment scheme known as AEOS (Agri-Environmental Options Scheme) became available. This scheme gave support and made payments for a menu of options that included a number of agroforestry actions (though the dreaded AF word was not mentioned). Such included the planting of field trees individually or in groups, the planting of new hedges and the planting of traditional orchards. Again, I took up all of these options applying agroforestry principles.

bility in Ireland because Forestry cannot have animals and grazed areas cannot have this many trees.



Fig. 3: An ideal silvopastoral scene which is an impossi- So there you have it! Officially agroforestry doesn't exist in Ireland, whereas in reality it is widespread. Officially there are no supports for Agroforestry in Ireland but if you wish to apply agroforestry on your farm, there are ways and means. There is however a need for this situation to be rationalised and for the AF word to be understood, respected and used in policy. There is a need to spell out the benefits of agroforestry and a need to explain that silvopastoral agroforestry is essentially just growing trees adjacent to grazed grassland and grazing livestock adjacent to trees. We need a national focus group to start this discussion. I

am delighted at the development of EURAF and I look forward to a time when AF in Ireland will be able to come out from under the bushes and show its beautiful face.

Source: William Considine, Ireland, December 2014.

P.S: A very limited AF support scheme has just been announced. It is included in the Irish Forestry Policy Proposal 2014-2020. Supports are limited to 195 ha of AF over the five years i.e. 39 ha per annum. It is limited to Silvopastoral and the AF area is to be defined as forestry. Defining it at as forestry along with other restrictions appears to rule it out as an option for practical farmers. Sadly, I cannot envision any circumstances where this scheme will be adopted by myself or any Irish Farmer. I suppose the fact that AF is mentioned at all is a step forward. (January 2015)



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### 2.3 Two national meetings dedicated to agroforestry in France

The French Ministry of Agriculture, together with both national agroforestry associations (AFAF and AFAC-agroforesteries) and the Permanent Assembly of the Chambers of Agriculture (APCA) organized last year two meetings devoted to agroforestry: the first one in Jallais (western France) on the 27<sup>th</sup> of November and the second one in the premises of the Ministry in Paris on the 1st of December. These events were attended by more than two hundred participants.

In Jallais, the meeting focused on the visit to Mr. and Mrs. Gachets' farm (90 dairy cows, 110 hectares of which 11 hectares have been in agroforestry since 2013) to promote the exchange of experience. The benefits of hedges and of timber trees directly planted on the acreage of fields to reduce erosion, enhance water retention and the humus content in soil, and increase biomass production are well known. However, the economic valuation of hedges and trees mainly as fuel but also as timber or litter remains a key to the development of agroforestry. This topic must be addressed by farmers in order to diversify their business, with the need to acquire new skills. Furthermore, the development of agroforestry depends on the structure of the downstream sectors in a context dominated by the timber industry and its criteria of economic calculation. Strengthening research in the selection of plant material used in agroforestry could lead to a better adaptation of trees on fields and, indirectly, to a better value of wood and other by-products. Eventually, the agro-environment schemes which should support agroforestry on a national or European scale remain so complex that many farmers can't afford them. A simplification of these devices would be welcome.

On the occasion of the National Day held in Jallais, the new logo that will benefit farms which develop agroforestry was presented by both associations (AFAF and AFAC-agroforesteries). Mr. and Mrs. Gachet should be the first to obtain it in France.

In Paris, the national conference held on the 1<sup>st</sup> of December addressed technical and political topics as well. Philippe Balny, from the General Council for food, agriculture and rural areas (CGAER), presented a report on agroforestry which had been ordered earlier last year by the French Minister of Agriculture Stéphane Le Foll. This paper identifies the many technical and administrative obstacles currently hindering the development of agroforestry in France and offers solutions to address them. In his speech later in the day, Mr. Le Foll repositioned agroforestry in the broader perspective of the development of agro-ecology, one of the main purposes of the law for agriculture, food and forestry which was circulated on the 14<sup>th</sup> of October. Under the terms of the Ministry, the French government supports a doubling of the economic and environmental performance through innovative agricultural practices. Agroforestry should take advantage of a new dedicated network for research and development targeted at technical and economic references. The involvement of several agricultural high schools will ease the training of farmers in agroforestry. Last but not least, the opportunities offered by the second pillar of the CAP will be better mobilized to fund agroforestry projects.

On the occasion of the meeting held on the 1<sup>st</sup> of December, both national associations concerned with agroforestry (AFAF and AFAC-agroforesteries) announced their merger in 2015. This merger had been suggested by the CGAER in order to strengthen the associative action in favour of agroforestry. This initiative was welcomed by the minister himself.

Source: <u>Xavier Devaux</u>, EURAF National Delegate for France, AFAF and AFACagroforesteries, January 2014.



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#### 2.3 INTERNATIONAL AGROFORESTRY CONFERENCE IN ITALY

The International Conference "Agroforestry Systems, a Modern Response to Global Challenges of Climate Change, Food Production, Bioenergy, Environmental Restoration" was hosted by the National Research Council of Porano (CNR IBAF), Italy, on 16-17 Oct. 2014.

The conference was organized as the closing meeting of the European research project AgroCop-WoodWisdom Eranet. Leading international agroforestry experts were the main speakers of the meeting, and almost 30 posters were presented by researchers and stakeholders interested in implementing agroforestry. Presentations and posters are being uploaded online. More info about the conference can be found here.

Source: <u>Piero Paris</u>, Agricultural Research Council, Italy.

Inter alia, the following results were presented:

# Agroforestry systems that combine free range poultry in orchards, reduce the environmental impact of both animals raising and orchards

Raising free range poultry, that is, providing pasture to the animals is becoming ever more popular, due to the positive effect of pasture on meat quality and animal welfare and health. But the environmental impact of free range poultry is still debated, due to the high land use impact, partly related to the land needed for the grazing. But, who said that poultry should graze land that is not otherwise productive? Why not use an existing orchard, thus eliminating the extra land required for grazing? Combining orchards and animals was quite common in the past.



Recent research investigated the environmental impact of combining free range poultry and olive orchard, using the LCA (Life Cycle Assessment) approach. This approach estimates the environmental impact (on different impact categories) of a product, considering all the processes involved in the production.

The results showed that, in free range poultry system, grazing (i.e. 10 m<sup>2</sup> per chicken) increases the land use impact by 21 %, compared to confined animals. The land use represents about half of the total impact of the poultry system. Therefore, grazing in the orchard reduces the overall impact of the poultry system by about 10 %. But the free range birds also provided weed control and fertilization in the orchard, dramatically reducing the impact of the olive orchard.

The results suggest that grazing free range poultry in orchards reduces the environmental impact of both farming systems. The combined agroforestry system (orchard + chickens) also provided further benefits, not considered with the LCA analysis, such as improved meat quality, better animal welfare, and improved grazing: the presence of trees stimulates outdoor activities and grazing and reduces losses from predation.

Source: <u>Adolfo Rosati</u> (EURAF Deputy Secretary), Consiglio per la ricerca in agricoltura e l'analisi dell'economia agraria (CRA), Italy.



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## **3** FEATURED FARM: HERDADE DO FREIXO DO MEIO (PORTUGAL)

The <u>Herdade do Freixo do Meio</u> (HFM) is a farm located in Montemor-o-Novo in Portugal that manages 440 ha of cork oak and holm oak *Montado* agroforestry systems. The farm also includes portions of irrigated land, vineyards, olive groves and biodiverse pastures and enables to produce nearly all the ingredients of the Mediterranean diet with the exceptions of milk and fish. The HFM is considered an example of a multifunctional farm based on an agroforestry system in Portugal and remains one of the few economic viable projects on the area.



Fig. 5: Image of the Montado system at the HFM. Source: I-andvineyards.com

After being confiscated in 1974 during the Carnation Revolution, HFM was returned to the former owners in 1990 and since then tried to bring a new way of managing this heritage guided by the ethics of respect for the people and for the environment. The challenge of the new project was to efficiently manage a very ancient agroforestry system in Portugal by combining ancestral knowledge and sustainable practices and adapt it to the idiosyncrasy of the XXI century. The project seeks an economic sustainability along with the actual practice of appropriate social and environmental policies despite the hegemony of the economic markets that look for the maximization of profits at high environmental and social costs.

When the new project began in 1990, Alfredo Cunhal Sendim, the representative of the owners and new responsible, found the farm in weak conditions with a poor soil, erosion problems and a *Montado* with low levels of productivity. His first action was to ensure the recovery and maintenance of the quality of the soil as the base for increasing the productivity. The next step was the implementation of a new strategy with the unique goal of finding a sustained maximization of the management efficiency, considering the social-environmental-energy issues in order to achieve an economic stability. The new strategy was based in 4 basic pillars:

- Diversification: taking advantage of the structure of the *Montado* offering a multifunctional environment to increase the possible uses of the land and activities and therefore the sources of revenue. Example: tourist activities and environmental education.
- Differentiation: using local breeds, regional varieties and traditional treatments adding value to the final product. Also by using innovative and more sustainable techniques such as organic agriculture.
- Efficiency: improving the efficiency of the processes by adopting professional management and qualified workers, increasing the knowledge and welcoming the use of new sustainable technologies and sources of energy.
- Verticalization: considering the inclusion of all the steps of the product processing from field to final consumer including the opening of an own shop.

Since 2008, HFM acts also as an economic active agent by embracing autonomous but complementary projects that strengthen the system as a whole and increase the amount of products available from the farm. The independent projects include a 4.5 ha aromatic and



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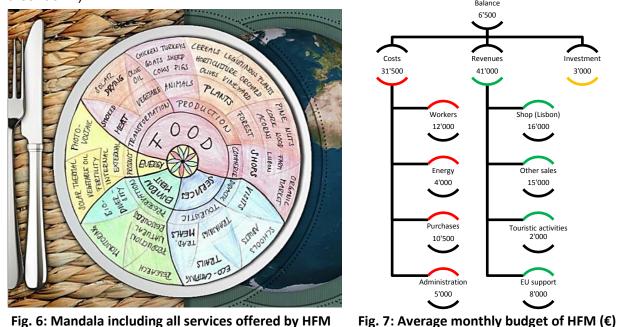
medicinal garden (2011), home-made bags and complements (2011), 2 ha of a horticulture garden and 5 ha of orchards (2011), free-range chicken production with a movable chicken house (2012) and a centre for artistic animations, storytelling and pedagogical workshops (2012).

HFM also implemented several projects concerning alternative sources of energy: solar, wind and recycled diesel. It acts as an eco-tourism centre hosting an eco-camping and organizing several pedagogical activities related to agriculture per year. It also supports scientific research project innovations (AGFORWARD since 2014) and PhD experimental plans (3 since 2011).

**Table 1:** Activities and related products at the Herdade do Freixo do Meio.

Activity	Products	
Forest production	Cork, Acorn, Pine nuts, Wood, Mushrooms, Wild Fruits	
Animal production	Iberian pork, Merino sheep, Serpentine Goat, Barrosão Cattle, Black	
	turkey, Broilers, Eggs	
Crop production	Cereals, Pulses, Vegetable, Aromatics and Medicinal plants.	
Fruit productions	Olive, Grapes.	
Leisure activities	Restaurant, Visiting, Hunting Tracking Formation.	
Processing	Meat, Olive oil, Vegetable processing, Solar Drying, Bread.	
Sales	Own shop in Lisbon Market.	

Nowadays the farm includes 7 types of activities (see table 1), produces around 300 different products and employs 12 workers directly and 8 through the associate projects. Four times more than the farms located around dedicated to intensive agriculture. The average budget of the farm for the last years has been around 0.5 million  $\notin$ /year (See Fig 7 for a monthly breakdown).



Sources: Josep Crous-Duran, Joao HN Palma and Alfredo Sendim, January 2015.

Interested to see a variety of pictures of and to learn more about HFM and Montado in Portugal? Please follow this <u>link</u> to download Alfredo Sendim's presentation (06/2014).



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## 4. MISCELLANEOUS

# World Congress on Integrated Crop-Livestock-Forest Systems & 3<sup>rd</sup> International Symposium on Integrated Crop-Livestock Systems

Under the motto: "towards sustainable intensification" <u>Embrapa</u> invites to these events, to be held in Brazil on July 12-17, 2015. The <u>programme</u> includes the following presentations:

- "Agroforestry systems that work in the tropics and temperate regions";
- "Successful smallholder agroforestry systems in Central America";
- "Smallholder silvopastoral systems".

The deadline for abstracts submission is 13 April 2015. Further details on abstract submission and registration can be found <u>here</u>.

Sources: Alberto Mantino, Scuola Superiore Sant'Anna – Pisa, Italy; Adolfo Rosati (EURAF Deputy Secretary), Consiglio per la ricerca in agricoltura e l'analisi dell'economia agraria (CRA), Italy.

### Research on: "Bioenergy provision by an alley cropping system of grassland and shrub willow hybrids: biomass, fuel characteristics and net energy yields"

This work was carried out by <u>Miriam Ehret</u> as part of her doctoral thesis within the framework of the German BEST project. <u>Link</u> for further information (abstract).

Source: Norbert Lamersdorf, University of Göttingen, January 2015.

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This is your newsletter! If there's anything you think should be included, please pass suggestions to <u>euraf at agroforestry.eu</u> for inclusion in the next issue.

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