AN OVERVIEW OF THE FRENCH LANDSCAPE CHARACTERISTICS AND DYNAMICS ON A NATIONAL LEVEL

Renée AOUN

Thessaly University, Department of Planning and Regional Development, Volos, Greece
Iskandar Aoun Building, Ballani Street, Batroun, North Lebanon, Lebanon, e-mail: renee_aoun@live.com

Keywords: France, agriculture, landscape history, landscape character, evolution, Common Agricultural Policy

Summary: The development of many of the present characteristic features of the agricultural landscapes in France shows the historical passage of time. The aim of this paper is to identify and summarise this history and to highlight the critical points that marked this evolution. The first part is an overview of the literature demonstrating that in the French case, the variety of agricultural landscapes is not just the result of historical events but is also due to the geographic and demographic contexts, as well as to many other factors. For this paper, historical studies and other data on the development of the agricultural landscapes have been collected. This overview, from prehistory until the present, shows when, what and why these changes took place. The second part aims to demonstrate the major types of agricultural landscapes on a national level. The third part introduces two case studies. One is in the Massif Central region and the second one in the Pyrenees. In these examples, we focus on more details about these regional landscapes throughout time and in their present situation to help understanding how mountainous agricultural regions can have different utilities according to the interactions with their environment. And finally, a forecast will be made for the way current policies are likely to affect the future of the agricultural landscapes of France. The purpose of this type of work is to help understanding the current reality and to elaborate scenarios for the future of these landscapes in the coming years by considering and understanding what could affect the landscape and what form those factors could take, such as social crisis, lifestyles, ecological changes and the economic situation. By analyzing the past, understanding the present, and attempting to imagine the future, we aim to improve and sustain the land and the people.

Introduction

The word landscape was born in the 16th century in the minds of painters who designate the decorative elements in the backgrounds as landscapes. Now, the landscape features any portion of space that offered a vision. But long before the birth of the term, the concept was already there. Some interpreted images prove that the ancients thought the area already in terms of landscape, even if they did not name it (MicheLIN 1995).

Agricultural landscapes are taken more into consideration in these days. The agricultural areas are affected by many changes which sometimes cause the loss of agricultural landscapes. Nowadays we notice a growing interest of people, and agricultural landscapes are now considered as one of the defining themes for regional identities. In addition to this, it is known that the landscapes of agricultural areas have developed over a long time and what is seen now is the fruit of different practices throughout the years. So the purpose of this work is to understand how the French agricultural landscape became what it is now through an overview, from prehistory until the present, showing when, what and why these changes occurred. It is important to specify that the landscape units that existed before the French Revolution are not necessarily related to the present French territory. Thus, this historical chronology is more complex than for smaller and more homogeneous countries.
Material and methods

The purpose of this work is to help understanding the French agricultural landscapes. By analyzing the past, understanding the present, and attempting to imagine the future, we aim to improve and sustain the land and the people.

The development of many of the present characteristics of agricultural landscapes in France shows the historical passage of time. To understand these landscapes we needed to investigate the evolution of the agricultural lands in France. Most data come from the ENITA Library at Clermont-Ferrand and basically from the personal libraries of Mr. Yves Michelin and Mr. Laurent Rieutort who helped me a lot by providing me with books and references on agriculture, history, geography and demography as well as maps and personal knowledge of the region.

Data and historical studies outlining the development of the agricultural landscape have been collected. The critical points that marked the evolution of the agricultural areas in France over time have been gained from the following books: «Les paysages français: synthèse» by BERINGUIER 1999, the two volumes of «Histoire du Paysage Français» by PITTE 1983 and from «Archéologie de la France rurale: De la préhistoire aux temps modernes» by COUDART 1996. The information about the Pyrenees region was mainly from «La forêt, l’homme et le troupeau dans les Pyrénées, 6000 ans d’histoire de l’environnement entre Garonne et Méditerranée, Géode, Laboratoire d’écologie terrestre» GALOP 1998, and the information about the Puys Chains was from the books «L’Identité de l’Auvergne, Mythe ou Réalité Historique, essai sur une histoire de l’Auvergne des origines a nos jours» by MARTIN 2003 and «Les Jardins de Vulcain: paysages d’hier, d’aujourd’hui et de demain dans la chaine des Puys du Massif central français» by MICHELIN 1995. The actual situation of the French agricultural landscape was partly from the book «Historiens et Géographes N° 370: Vivre en France dans la Diversité» written by MIOSSEC 2000. The policies that affect the agricultural landscapes in France were taken from internet sites and from interviews with local people.

This research started few months ago and the information collected led us to these results and conclusions.

Results and discussion

An overview of the French landscape

Prehistory
Before 6000 BC, the only actions are hunting, fishing, and collecting fruits and vegetables (COUDART 1996). The Neolithic people continue the practices of hunting and of gathering of fruits and vegetables. It is possible that the first areas where agriculture was introduced were those where the vegetation was already burned as a result of hunting (PITTE 1983).

In the south of Gaul, the first signs of rural society appear (domestication of plants and animals, food storage) in 6000 BC. In the north of Gaul, the beginning of the domestication of plants and animals appears in 4500 BC (COUDART 1996). The development of agriculture and the raising of animals spread throughout Gaul over 3 millennia. The exploitation of the forests by hunters exists contemporaneously with the cultivation of pasture lands for a long time during this period (PITTE 1983).
3000 BC, The first signs of permanent pathways appear, deforestation due to extraction of metals, such as bronze and iron and an intense deforestation on the limestone plains of the Parisian basin (Berenguier 1999).

Celtic invasions started 1500 BC. The Celts are an agricultural population by tradition, and many of the plowing techniques are improved along with the creation of the green fertilizer. The Celts are the first to create cities with agriculture taking place around them (Berenguier 1999).

**Roman period**
The first entry of Romans in the south of Gaul was in 125 BC. The conquest of Gaul by Caesar took place between 56 and 50 BC (Encyclopedia Universalis). During the Roman period, orchards, mainly vineyards, olive trees and chestnut trees, are planted in the campaign lands in the south (Encyclopedia Universalis). Geometric forms are adapted for rural pathways and agricultural lands. In 92 AD, the emperor orders the removal of half of the vines planted in Gaul and forbids any new vine culture (to maintain the level of cereal production) (Pitte 1983).

192 was the date of the beginning of the civil war in Gaul. A tragic period followed the civil war; there was a destruction of many lands between the years 235 and 275 (Encyclopedia Universalis).

The Roman Empire ended in the 5th century, which was followed by many changes like the relocation of settlements and the construction of new villages by the new occupants, and a decline of the cultivated lands for the benefit of the fallow land, heather and forest (Berenguier 1999).

**The Middle Ages**
Even after the end of the Roman period, the southern part of France is still influenced and manipulated by the Romans (especially the villages in high altitudes). The rural landscapes deteriorate during the medieval period. We notice that in this period the villages are formed around the castles, churches and monasteries.

From the beginning of the 11th century, the deforestation increases to the benefit of the agricultural lands. In the north and north-east of France, open fields are taking shape. In the western part of France, there is mostly bocage and the mosaic landscape. The kings and lords take conservative measures to stop the decline of the forest (Berenguier 1999).

In the 12th century, the agricultural areas reach their maximum levels. The first open fields in the center of the Parisian Basin were formed. The commercial exchange favours the development of animal husbandry and the speculative cultures.

During the 14th century the Hundred Years War and the Black Plague that appeared in France in that period, caused a demographic crisis (Pitte 1983).

**The making of the French landscape**
During the 16th century, the population increases to the level reached before the demographic crisis of the 14th and 15th centuries. This growth requires the extension of agriculture into new areas. We observed the beginning of land concentration and consolidation of open fields’ plots in the center of the Parisian Basin, the transformation of the land slopes into cultivated lands by use of terracing techniques, the drainage of wet lands and the irrigation of areas affected by drought (Berenguier 1999).
From 1562 to 1598, the War of Religion between French Catholics and Protestants causes an unstable situation in France. In 1565, a horrible winter kills people, livestock and fruit trees.

In the 15th century, new plants were introduced to France; tomatoes were brought from the New World, potatoes from Peru, and corn from Colombia. Arriving to the 16th century the only grasslands left are the wet lands, the high mountains and the lands of poor soil (used for livestock grazing).

A period of prosperity took place in the 16th century after the effort of Minister Sully leading to the edict that marked the end of the war (BERINGUIER 1999).

The 17th century saw the beginning of vineyard specialization in the Mediterranean plains (Languedoc), and the drainage of coastal swamps in the north.

In 1669, a law is introduced allowing the intensive and rational exploitation of forests (PITTE 1983). In 1709, another horrible winter kills a great number of people, livestock and fruit trees.

At the beginning of the 18th century, legume crops were introduced on fallow (BERINGUIER 1999). In this period, the transport of agricultural products and ores was made by canoes via rivers. The development of the road network improves the transport of agricultural products.

An increase of the Feudal taxes which are proportional to the harvested production was followed by their abolition in the 4th of August 1789.

The French identity under construction

The 18th century saw the introduction of new forms of taxes by Napoleon based on the wealth of lands. 600,000 ha of fallow lands are transformed into agricultural lands. In this period agricultural production intensified through the introduction of mechanization and chemical fertilizers (PITTE 1983).

Also during the 19th century, the industrial revolution changed the landscape significantly. The development of the railroad network leads to the rural exodus which provided human resources for the industrial sector. Simultaneously, railroads were used to transport fertilizer, making its use more widespread (BERINGUIER 1999). 1876 was the beginning of the reforestation movement.

In the second half of the 18th century, the maximum population is reached in most rural areas; as a consequence there was an extension of agricultural area into the most difficult lands in the Mediterranean region through the use of terraces. Railway and urban markets are responsible for the fast appearance of new rural landscapes. For example, in the plain of Combat Venaissin there was an intensive agricultural production of legumes (horticulture) and fruit production with dense irrigation systems. The plains of Languedoc concentrated on viticulture. In the Normandy, there was grass; livestock and dairy production were largely exported to the capital. After that, France faced a serious economic crisis, due to importation of less costly wheat from Africa and beef from America. As a reaction, the French government closes the borders, blocking the modernization of agriculture.

Overgrazing the mountains of France caused a serious erosion which lead to the creation of a new law for the reforestation of lands.

From 1880, more than 6 million ha of the agricultural area in use is lost in one century (because of the crisis of Phylloxera, the world war one...). After 1945 the agricultural population continues its migration (BERINGUIER 1999). Remaining farmers expanded,
restructured and modernized their agricultural plots. Some regions maintained their agricultural areas, like the eastern plain of Corsica. In other regions, agricultural lands were deserted. This happened especially in mountains and in other disadvantaged zones, such as the Alps of the Haute Provence.

The influence of the CAP (Common Agricultural Policy)

During the second half of the century there was a real revolution in agriculture and husbandry. The increased mechanization of this period fosters the consolidation of smaller farms into large plots of agricultural land, with the more successful farms overtaking failing or abandoned ones. Farms are joined to form large blocks of agriculture especially in the plains of the Parisian Basin and the western areas. These mutations have consequences on the environment (Beringuier 1999). After the Second World War, the departments of the Massif Central see impressive progress in reforestation to the detriment of the remaining agro-pastoral lands. The forest in the last century gains twice its surface (Beringuier 1999).

Many important developments in agriculture were influenced by the Common Agricultural Policy (CAP) of the European (Economic) Community. The CAP of 1962-1966 helps the intensification of production which was favoring significant landscape changes like the union of lands, the elimination of hedges between plots, and the introduction of new irrigation systems. This period also watched the reforestation of mountainous areas and the cessation of cultivation in disadvantaged zones.

Between 1992 and 1997, about 160,000 ha are lost in to fallow land, but there remain gains of land surfaces by livestock and viticulture in the southeast (Côtes du Rhône, Corbières, Saint-Chinian) (Beringuier 1999).

During the 1980s, the support of oilseed culture by the European Community helps their expansion; like in the eastern part of the Paris Basin where the culture of colza was spreading, and the cultivation of sunflower in Charente or in the counties of the Loire and the Garonne.

The premium for the uprooting of vineyards gradually reduces the share of vines in the landscape of the Languedoc plain; in return, wheat gains in some areas.

The Second CAP in 1992, which takes into consideration agro-environmental measures, lead to the conservation of ecological places and landscapes. Also, the development of agriculture over grasslands took place due to greater financial support for agriculture than for husbandry.

The latest CAP in 2009 removed the stability of milk price; changes are anticipated in the landscapes where livestock are raised. This CAP also increases the orientation toward the development of fuel crops. Currently farmers represent 2% of the active population, meaning that the exploitations are few in number but large in size, with reduced manpower in this sector.

As we can see the European projects have a big effect on the agricultural landscape. After all, the crises that touched the agricultural sector, the French and the European policies were concentrating on helping farmers through different programs to encourage them not to abandon their lands, and to avoid having them relocate to cities with no work as well as encouraging them to plant what the country needs.
We can assume that the French landscapes are in the first place a political construction, where farmers benefit from financial aid through these different programs.

The Present Agricultural Landscapes

Certain profound changes have affected the French countryside. It is during the period of “The Glorious Thirty” (which begins after the 2nd World War) that the French countryside has experienced its most profound changes since the modernization. The enlargement of scale in farming has changed the face of the countryside that was in the late 1970s, more open than it was 20 years earlier. But the movement is not general; it has not progressed in the same way everywhere, even though sometimes the movement was in the opposite direction with the closure of agrarian spaces in disadvantaged areas. As a result, rural areas have retained a significant degree of diversity (Miossec 2000).

The countryside of France in the north and the east is mainly composed of open fields: the Paris basin (especially Beauce, Brie, and Champagne), the region of Alsace, the superior basin of Saône and Limagne. These places were best suited to the modernization of agriculture, they increased their land surface to be more adapted to machinery. At the end of spring, one can observe clearly the mosaic pieces formed by wheat, oat, corn, legume crops, and sugar beet sometimes (Miossec 2000).

The bocage in France form a long band, which cut France diagonally from the Bretagne to the Jura passing by the Central Massif and the Saone (Miossec 2000).

The South West of France disposes some rural landscapes that one cannot consider as open fields or bocage with its mosaic of agricultural lands and heather. This landscape is called “type Aquitain” which is the best term to describe it. And it is well seen in the Quercy, the Molasse, the Bordelais and the Foret Landaise (Miossec 2000).

The Mediterranean part was characterized by the abandonment of lands. Here, the diminishing of agriculture gave way for heather that now covers all the old terraces of the region. However, the south of the Mediterranean region has legumes and fruit trees like in the Roussillon and irrigated legumes in the Comtat Venaissin. The landscapes vary between the different regions like, the Cevennes, the Corbieres, and the Preaples. The agriculture of olive trees and vines find some new entries nowadays (Miossec 2000).

Two case studies

The Pays chain was used for agriculture since ancient times. Cycles of deforestation and reforestation occurred. In the centuries before the Romans, the agricultural pressure accelerated. At the end of the Roman period, the forest barely existed.

In the early middle Ages, new villages developed around the castles, churches and monasteries. A new organisation of the territory appeared, the cultivated lands were concentrated around the houses, and the pasture lands further away.

Between the 12th and 13th century, agriculture expanded and forests regressed.

In the 14th century, the Hundred Years War and the Black Death led to a decrease of population. A movement of reforestation of lands far from the villages took place.

At the beginning of the 15th century, reforestation took place on mountain slopes. Therefore the lords encouraged the resettlement of people in this area by the authorization of collective land rights.
From the 17th century, another regression of the forest caused by wood-cutting and grazing, which decrease the natural regeneration of forests. Before the French revolution the forest had disappeared and its place was taken by grains. (The grains were used to pay the land lords).

During the 1st half of the 19th century, agriculture became more demanding in manpower, but more productive than before, too (with no more pressure from the land lords). In 1830, the first agricultural revolution took place; the farmers cultivated cereals near their houses, and used the communal lands for grazing animals.

From 1860 to 1870 the pasture lands were in a very bad condition, because there were no restrictions, and the methods used in grazing harmed these lands. The first signs of reforestation by humans according to the new laws were in 1880. There were also a retreat of cultivation in disadvantaged zones; therefore there was a development of heather.

The villages, whose populations had doubled, now became subject to a rural exodus. From 1920, the collective pastures were abandoned.

In less than 30 years the stability of the landscape of this region disappeared, where spontaneous forests or planted ones started to grow because of the modification of agricultural practices. Husbandry took top priority, cultivated lands became mechanized and abandon lands were planted with forest trees (Martin 2003).

In the Pyrenees, from the first centuries after AD, livestock raising activity was in the second place after the cereal culture in this region. The reforestation took place after the Roman period until the 8th century.

The medieval expansion started at the beginning of the 10th century and was amplified at the 12th century. It reached its peak by the end of the 13th century, where we can see the importance of the pastoral activity plus the agriculture of cereals and vines.

Between the 12th and the 13th century, the deforestation was so important. In the middle of the 12th century, the first measures concerning the deforestation and the exploitation of forests were taken. This reveals the concern of local authorities facing the size of the deforestation.

Between 1298 and 1329, the decrease of the pastoral activities matches with the selling of the monastery pastures to another village.

Posterior to the apogee of the middle age, there was a depression of the human activities from the 14th till the end of the 15th century caused by the Hundred Years War and the Black Plague which led to a demographic reduction. The increase of pine trees indicates the reforestation which was consecutive to the decrease of the pastoral and agricultural activities.

During the 15th century the installation of 2 wide pastoral units indicates that there is a persistent vivacity in that sector. The installation of these units could be a social reaction facing the fall down that took place at the beginning of this century or a reconstruction after crisis. The 15th century was the beginning of raising livestock for milk production on the mountains.

From the 16th century, an expansion of the agro pastoral activities highlights the increase of cereal culture. From the end of the 16th century, the reforestation took place and the level of pine increased in the region. Such paradox can be explained either by the good management of the forest, or by the modification of the livestock raising systems from livestock for meat and wool to milk production, that have fewer needs in pastoral lands. Therefore the massive deforestation is no longer necessary.
The decrease of raising livestock from the 18th century was also in favor of the reforestation.

By comparing these two cases, some elements can be identified:
In both cases, there was a movement of deforestation in the Roman period, and after the end of the Roman Empire, reforestation took place.

Between the 12th and the 13th century, there was a regression of forests and an agriculture expansion over the deforested area in both areas.

But in the Pyrenees, between 1298 and 1329, there was a decrease of the pastoral activities that matches with the selling of the monastery pastures to another village.

In the 14th century, the Hundred Years War and the Black Death led to the decrease of population and a depression of the human activities in both regions.

At the beginning of the 15th century, reforestation took place. Therefore, in the Puys chain, the lords encourage the reinstallation of people in this area by the authorization of collective land right. As for the Pyrenees, there was an installation of two wide pastoral units indicating a social reaction facing the fall down that was in the beginning of this century or a reconstitution after crisis.

From the 17th century, a regression of the forest caused by the cuts of woods and the effect of grazing took place in the Puys chain. As for the Pyrenees’ case, there was a change in the type of livestock raising system from livestock for meat and wool to milk production, that have fewer needs in pastoral lands, which had less deforestation movement and in some places the level of pin increased in the region.

The decrease of the livestock rising from the 18th century was also in favor of the reforestation in the Pyrenees. As for the Puys chain, the first signs of reforestation by humans started after the new law, in 1880.

In less than 30 years the stability of the landscape of these regions disappeared, where spontaneous forests or planted ones started to grow because of the modification of agricultural practices (GALOP 1998).

The way current policies are affecting the future agricultural landscapes in France

As we can see in the latest CAP (2009), the price of milk is no longer to be kept stable; changes are anticipated in the landscapes where livestock are raised. Also there is an increase in orientation towards the development of fuel crops. All these trends will affect the landscape.

Also, a plan was proposed by the ministry of agriculture in France called “Objectif Terre 2020” that has the idea of agriculture economically performing with an efficient ecology based on a better water consumption, and contribution in the restoration of its ecological conditions, a contribution to the enrichment of the biodiversity, and a protection of agricultural soils (ftp1).

All this will have a direct and strong impact on the agricultural landscape in France.
Conclusion

As a conclusion we can say that there are three main factors that affect the changing of the landscapes. The first one is the type and level of production (cattle, sheep or cereals), the second is the type of practices and level of knowledge and the third one is the density of population and farmers.

These factors are related to 3 dimensions. One, the climate conditions (little ice age or warming), two, the economic situation and trades rules and three, the social situation (individual or collective farming systems).

And finally we should not forget the influence of the national and European policies.

To recapitulate and to synthesize the ideas that just passed, in the following table a strategic analysis for the future is carried out:

<table>
<thead>
<tr>
<th>STRENGTHS</th>
<th>WEAKNESSES</th>
</tr>
</thead>
<tbody>
<tr>
<td>The presence of good potential for production</td>
<td>The environmental impacts</td>
</tr>
<tr>
<td>The presence of diversity of situations</td>
<td>The decrease of farmers population</td>
</tr>
<tr>
<td>The good knowledge base of the farmers</td>
<td>The presence of too much work for shrinking farmers</td>
</tr>
<tr>
<td>The agriculture: a profitable activity with a good economical and technical environment in france</td>
<td>A strong dependency on big companies</td>
</tr>
<tr>
<td>The presence of a national identity based on agricultural landscapes</td>
<td>The presence of contrasts between productive and poor regions</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>OPPORTUNITIES</th>
<th>THREATS</th>
</tr>
</thead>
<tbody>
<tr>
<td>The opportunity of having a link between landscapes and tourism</td>
<td>Competition and conflicts over the land use in suburban areas</td>
</tr>
<tr>
<td>The large demand of the urban population to preserve these agricultural landscapes</td>
<td>The evolution of CAP</td>
</tr>
</tbody>
</table>

Acknowledgments

I would like to take the opportunity to thank all the persons who helped and stood by me during my work. First, I would like to express my thanks to the University of Thessaly who helped me reaching this level.

I would like to thank Mr. Yves MICHELIN who worked with patience and who sacrificed a lot of his time to help me accomplish this work.

My great gratitude goes to Mrs. Alexandra KRUSE for her extreme engagement and friendliness and who made the completion of this work possible.

I would like to thank Mr. Laurent RIEUTORT who made my work easier.

I would like to express my special thanks to Mr. Walid CHEDID who helped me and supported me when I needed.
Kulcsszavak: Franciaország, mezőgazdaság, tájtörténet, tájjellemző, fejlődés, Közös Agrár-politika

A francia mezőgazdasági tájak számos jelenlegi jellemzőjének fejlődése mutatja a történelmi idők jellegzetességeit. A cikk célja, hogy meghatározza és összefoglalja ezt a történetet és felhívja a figyelmet a kritikus történésekre, amelyek a fejlődés során bekövetkeztek. Az első rész az irodalom áttekintése, amely a francia esetben azt mutatja, hogy az agrártájak sokfélesége nem csak a történelmi események eredménye, hanem a földrajzi és a népességi jellegzetességek is hatással voltak rájuk, és még egyéb tényezők. Történelmi tanulmányok és egyéb adatok kerültek felhasználásra a mezőgazdasági tájak fejlődésének jellemzéséhez. A jelenlegi áttekintés a korai történelmi eseményektől a jelenkorig bemutatja, hogy mik voltak a változások, mikor és miért következtek be? A második rész célja a fő agrártáj típusok bemutatása nemzeti szinten A harmadik részben két esetet mutatunk, hogy érthetőbbé tegyük, hogy a hegyvidéki agrár régiók milyen haszonnal járnak a környezettel való kölcsönhatásuk során. Végül előrejelzést mutatunk be arra vonatkozóan, hogy a jelenlegi politikai döntések hogyan befolyásolják a francia agrártájak jövőjét. Az ilyen típusú munka célja, hogy segítsége a jelenlegi realizmus megértését és hogy kidolgozzon szcenáriókat ezen tájak jövőjére nézve, figyelembe véve és megértve azokat a hatásokat (pl. szociális krízis, életmód, ökológiai változások és gazdasági helyzet). A múlt elemzésével, a jelen megértésével és a jövőkép elképzelésével szeretnénk segíteni a tájak és emberek fennmaradásában és fejlődésében.