



Food and Agriculture
Organization of the
United Nations



Málaga Raisin Production System in La Axarquía. Spain

**REGIONAL MINISTRY FOR AGRICULTURE, FISHERIES AND RURAL
DEVELOPMENT OF THE ANDALUSIAN GOVERNMENT**

Seville, 2017

© Cover Photo: Beatriz Moreno Escalona

© FAO 2017

Málaga Raisin Production System in La Axarquía. Spain

**REGIONAL MINISTRY FOR AGRICULTURE, FISHERIES AND RURAL
DEVELOPMENT OF THE ANDALUSIAN GOVERNMENT**

Seville, 2017

The designations employed and the presentation of material in this information product do not imply the expression of any opinion whatsoever on the part of the Food and Agriculture Organization of the United Nations (FAO) concerning the legal or development status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. The mention of companies or products of manufacturers, whether or not these have been patented, does not imply that these have been endorsed or recommended by FAO in preference to others of a similar nature that are not mentioned.

The views expressed in this information product are those of the author(s) and do not necessarily the views or policies of FAO. This product is the result of a free, open collaborative process, edited by FAO.

© FAO, 2017

FAO encourages the use, reproduction and dissemination of material in this information product. Except where otherwise indicated, material may be copied, downloaded and printed for private study, research and teaching purposes, or for use in non-commercial products or services, provided that appropriate acknowledgement of FAO as the source and copyright holder is given and that FAO's endorsement of users' views, products or services is not implied in any way.

All requests for translation and adaptation rights, and for resale and other commercial use rights should be made via www.fao.org/contact-us/licence-request or addressed to copyright@fao.org.

FAO information products are available on the FAO website (www.fao.org/publications) and can be purchased through publications-sales@fao.org.

Málaga Raisin Production System in La Axarquía. Spain

Table of contents

SUMMARY INFORMATION.....	7
DESCRIPTION OF THE AGRICULTURAL HERITAGE SYSTEM.....	10
<i>I Significance of the Proposed GIAHS Site.....</i>	<i>10</i>
1 Importance of the grapes productive system.....	10
2 National and international importance of raisins.....	12
3 Historical importance.....	18
4 Relationship with European policies.....	20
5 Agricultural values.....	22
6 Cultural values.....	27
7 Functions, goods and services provided by the system.....	27
<i>II Characteristics of the Proposed GIAHS Site.....</i>	<i>29</i>
1 Food and livelihood security.....	29
2 Agro-biodiversity.....	38
3 Local and Traditional Knowledge Systems.....	45
4 Cultures, Value Systems and Social Organisations.....	51
5 Landscapes and Seascapes Features.....	64
ACTION PLAN FOR THE PROPOSED GIAHS SITE.....	83
<i>I Methodology.....</i>	<i>83</i>
<i>II Objectives and scope of the dynamic action plan.....</i>	<i>84</i>
1 Purpose.....	84
2 Objectives.....	84
3 Scope.....	84
<i>III Action plan.....</i>	<i>85</i>
1 Threats and challenges.....	85
2 Needs.....	85
3 Strategic lines and measures.....	86
<i>IV Consistency with EU policies. Potential funding opportunities.....</i>	<i>89</i>
<i>V Proposal to create a body to manage the GIAHS.....</i>	<i>90</i>
1 Name suggested for the future Association.....	91
2 Proposal for the management structure of the Association.....	91
3 Initial support for the Management of the Dynamic Action Plan.....	92
ANNEXES.....	93

1 Map of slope.....	94
2 Boundaries of the GIAHS area.....	95
3 Routes of La Axarquía.....	104
4 Species of floristic interest.....	106
5 Lexicon.....	109
6 Examples of literary texts.....	111
7 Cooperation Protocol to showcase the Muscatel products in cuisine. Grapes, raisins and wine: innovation for a new cuisine.....	114
8 Other food festivals.....	118
9 Seminar on "Vine and wine landscapes" organized by the foundation of the Centre for Andalusian studies. Manifesto of support to the GIAHS proposal.....	119
10 Other building elements.....	128
11 Institutional support.....	130
12 List of participants in the Technical Committee.....	148
13 Governance process.....	151
14 Factsheets of the measures included in the Dynamic Action Plan.....	155
15 Indicators of the Dynamic Action Plan.....	174
Table of figures.....	180
Table of maps.....	183
Index of tables.....	184
BIBLIOGRAPHY.....	185

SUMMARY INFORMATION

a Name/Title of the Agricultural Heritage System:

Original name in Spanish: SISTEMA PRODUCTIVO DE LA UVA PASA DE MÁLAGA EN LA AXARQUÍA

Translation into English: **MÁLAGA RAISIN PRODUCTION SYSTEM IN LA AXARQUÍA**

b Requesting Agency/Organization:

Consejería de Agricultura, Pesca y Desarrollo Rural de la Junta de Andalucía.

c Responsible Ministry (for the Government):

Original name in Spanish: Ministerio de Agricultura y Pesca, Alimentación y Medio Ambiente

Translation into English: Spanish Ministry of Agriculture, Fisheries, Food and Environment

d Location of the Site:

Spain/Andalusia/Málaga/District of La Axarquía.

Raisins are produced in the South of Spain.

The main raisins producing area coincides with the natural district of La Axarquía. It is located at the Eastern part of the province of Málaga, to the East of the capital and it borders the province of Granada.

Coordinates: 36°50'00" N / 4°10'00" O

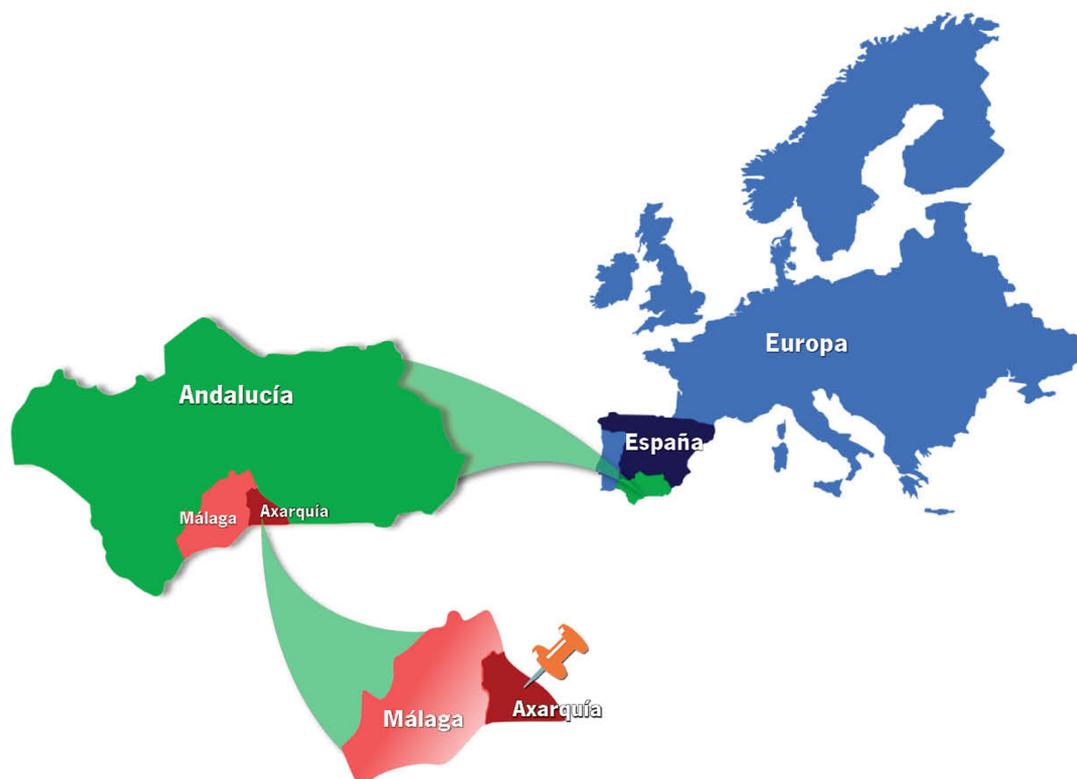


Fig. 1. Raisins producing area in La Axarquía (Málaga)

Annex 1 Map of slope shows the map of the slopes of the area of La Axarquía.

e Accessibility of the Site to Capital City or Major Cities:

The city of Málaga, capital of the province, has a complete network of road, railway, port and airport communications that enables the access to and from the main cities of Andalusia, Spain and the world.

The main village of the region (Vélez-Málaga) can be accessed from the airport of Málaga in a 40-minute drive using the main road network (A-7 motorway) which is connected to a winding network of national, regional and local roads that connect all coastal and inland villages of La Axarquía.

To all this, it is necessary to add a vast array of lanes and trails, more or less passable for vehicles, which connect the small inland towns of the area to the farmhouses that are distributed throughout a landscape characterised by an increasing marginal agriculture.

There is a private airfield located in Vélez-Málaga.

f Area of Coverage:

The total area of La Axarquía occupies 1,028 km², from which 694 km² represent the inland part of the area which has a great dependence on agriculture.

The area proposed as GIAHS has a total area of 28,039 hectares, distributed between 16,673 has located in the sub-area of the Eastern Axarquía and 11,366 has located in the Low Axarquía (see Map of the location of both GIAHS subareas: Eastern Axarquía and Low Axarquía in Annex 2). In this area, there are: 1,113 hectares dedicated to the production of grapes for raisins and 13,310 hectares of other crops, including 1,532 hectares dedicated to the production of grapes not necessarily intended for raisins production.

g Agro-Ecological Zones (for Agriculture, Forestry and Fisheries):

As far as land use is concerned, 50% of the district of La Axarquía is classified as marginal land with some lands of moderate capacity for use, while 24% is classified as marginal and protected land or unproductive land.

Soils are immature lithosols and regosols of slate and other decaying siliceous materials, rich in minerals but poor in organic matter due to the insufficient water content caused by erosion.

These areas are used for rain-fed agriculture; the cultivation of trees (olive trees, almond trees and vines) occupies the non-protected mountainous area (with steep slopes) and rain-fed arable crops are interspersed with natural vegetation in flatter areas with average slopes.

Regarding landscape, this area is made up by a succession of hills and riverbeds.

h Topographic Features:

The average height of La Axarquía is 391 m. Even though this average is high, the identity of the area is being a territory showing a relief with steep slopes, where in just 40 km in a straight line, height changes from 2,068 m high in the highest peak to the level of the sea.

The average gradient of the producing area is more than 45% in more than half of its territory where grapevines and other woody trees are the main elements to stop the desertification of these areas.

i Climate Type:

The district has a Mediterranean climate, reaching an average temperature of approximately 17°C (62.6°F).

Rainfall is seasonal, having a dry period from May to September. Rain is very scarce. The average rainfall is about 375-450 mm; it is concentrated in the cold season and torrential, a fact

that favours soil erosion. As there are periods of extreme drought in the area, vine-growing and other woody trees, such as olive trees and almond trees, are the only possible farming activities in most of La Axarquía.

j Approximate Population (Beneficiary):

The total population of the district is 206,226 inhabitants, being the municipality of Vélez Málaga, in the coastal area, the most populated, with a population of almost 79,000 inhabitants according to the latest data available. In total, the district comprises 31 municipalities.

k Ethnicity/Indigenous population:

There is no specific ethnic group. The population of the area is similar to the population of any other rural area of Andalusia.

l Main Source of Livelihoods:

The agricultural and environmental conditions (climate, landscape, orography, etc.) determine the resources available in the area and the fundamental components of the other sectors of the economic activity of the area: agri-food, tourism, leisure, construction, services, etc.

The most important food products of the area are produced in different sub-areas. Therefore, the North-Western area is dedicated to the cultivation of cereals, la Vega and Coastal areas produce subtropical fruits and the North-Eastern and Central areas, with steep slopes, are focused on vine-growing for the production of raisins and mountain olive groves.

Tourism is mainly developed on the coast; however, inland areas are also developing new applications.

m Executive Summary

The cultivation of Muscatel grapes in the mountainous areas of Málaga is very important in the agricultural economy of the area as it is developed in areas of steep slopes without any other agricultural alternative. Moreover, it helps prevent the erosion produced by a climate of seasonally heavy rains.

Traditional, manual and craft technologies are used in the cultivation, harvesting, grapes drying process and removal of the grapes from the bunch. This represents a traditional way of life that identifies the area with the culture associated to raisins production.

The product is obtained by sun drying mature grapes of the Muscatel of Alexandria or Muscatel de Málaga variety; a process that enables their preservation and marketing for direct consumption.

The artisanal sun-drying process used to produce raisins gives the product special organoleptic characteristics, making them unique in sweetness, texture and colour, in such a way that during the 18th and a large part of the 19th centuries, they became one of the most exquisite products of European and national markets.

Today, the decline in consumption and production endangers the maintenance of this production system that brings cultural uniqueness to the area.

Nowadays, raisins production does not exceed 500 tons and it is mainly for the Spanish domestic market and for small exports to European countries and Japan.

Maintaining this grape-growing system and its sun-drying transformation process is essential in order to maintain the landscape, as it prevents erosion and desertification processes and it is an example of how the people of the area relate with their territories and their cultural traditions.

Raisins are a structuring element of the territory. After years in decline, nowadays, the interest to maintain, develop and restore the socio-cultural richness generated throughout history that has also allowed to build the spirit of the region, has revived.

DESCRIPTION OF THE AGRICULTURAL HERITAGE SYSTEM

I Significance of the Proposed GIAHS Site

1 Importance of the grapes productive system

The farming techniques used in vine growing for the production of raisins in the area of La Axarquía are very similar to those techniques used in organic farming due to the impossibility of intensification and to the little profit margin of the crop.

In La Axarquía, there are several conditions that hinder farming practices and this is why it is necessary to develop the tasks by hand. In addition to the fact that slopes exceed the safety limits for mechanical tasks, the presence of lithosols and rock masses make these tasks even more difficult. On the other hand, smallholdings are scattered all over the territory so, using machinery becomes very difficult from the economic efficiency point of view.

This is a low-tech agriculture that keeps the same methodology used in ancient times with a low use of synthetic products that also uses farming techniques aimed at preserving the environment (low tillage, addition of organic matter), what means, tasks that require a lot of labour force.

The entire vine growing and raisins production processes are done by hand using traditional tasks that have been passed down from one generation to the next and that are part of the agricultural heritage of the system (see section on Farming techniques to produce high quality raisins). Thus, planting and tillage are made by hand using a hoe and a peak; same as pruning, that is developed using specific scissors. Moreover, fertilization (carried out every two years) is done by the farmer by applying manure by hand. Finally, plant health treatments are applied using a backpack carried by the farmer on his/her back.

During harvest, bunches are cut using a pocket knife and then carefully placed in boxes (aportaderas) or boxes that will be later put on a frame called "espedrera" on the mule that will transport the grapes to the farmhouse. Until the 1960s, flat baskets (also called "fruteros" - fruit bowls), where grapes were carefully placed cone shaped with peduncles outward and upward, were used instead of boxes. Farmers carried them on their heads to bring grapes to the drying floors that were prepared also by hand using again the hoe during the end of the summer.



Fig. 2. Traditional way of transporting grapes using "fruteros" (a kind of fruit bowl)

The process ends with the drying and removal of the raisins from the bunch, once they are dried. It is a task also developed by hand using specific scissors designed to this end (see Fig. 31.)

The Specifications¹ of the Protected Designation of Origin and its Regulating Board² include most of the traditional farming techniques used in the area, as well as those related to grapes drying and the removal of raisins.

The planting system used is called in Spanish a tresbolillo (rows that are indented at the even rows, so that the seeds are placed in a crossed pattern. This method is



Fig. 3. Vineyard planted using the system called “a tresbolillo”

much better, as more light may fall on the seedlings as they come out). It clearly predominates over other systems used as it occupies about 90% of the area of the district. This system is the one that best fits the topographical features of the area since the organisation of plants in parallel and diagonal rows contribute to stop soil erosion and flushing. The impossibility of mechanization results in farmers increasing planting density. This density sometimes can even reach 5,000 vines per hectare. Currently, tradition is starting to disappear and, as a consequence, most of young vines are being planted in rows.

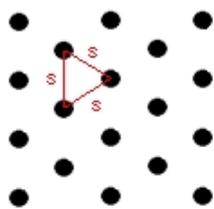


Fig. 4. “A tresbolillo” planting system

Vine training is carried out to give vines a round or conical shape. To form the vine, a single vine shoot is chosen as a guide, and a bud is pruned on a dormant one. The following year, another vine shoot of similar characteristics is left and three buds will be pruned on the dormant ones. By doing this, three vine shoots will be obtained from which two will be chosen to form a very open "V". This process will continue until the vine has four cordons (also called 'arms').

Regular pruning is developed every year and it is very specific as it aims to obtain lax, little compact bunches with large berries, a fact that will allow to obtain raisins with a maximum quality. Pruning is done by leaving 4, 5 and even 6 cordons (also called arms) on each vine and, in each cordon a cane is left with two buds: one will produce the bunch and the other will produce a shoot that will produce the bunch during the summer and will enable to extend the cordon the following year.

The climatic constraints of the area force vine-growers to select those canes grown downwards, a fact that together with the bina and tipping tasks (see section Main farming activities), enable bunches to grown over a clean area. In addition, this will enable new shoots to grow so that they will protect bunches during the summer when they ripe.

This way of working leads to farms that do not respond, in essence, to the functioning and organization of the principles that underpin the capitalist economy. By contrast, these farms

¹ Order of 15 September 2010, by which a positive decision in relation to the request for the registration of the Protected Designation of Origin “Pasas de Málaga” in the corresponding Community register, is issued.

² Order of November 6, 1996, which approves the Regulations for the Protected Designation Of origin “Pasas de Málaga” (Málaga raisins) and its Regulating Board. BOJA (Spanish acronym for the Andalusian Official Gazette) Number 135.

have a distinctly family nature, characterized by a low level of incomes and capital and a lot of labour force^{xxi} needed.

This agricultural economy, based on smallholdings or similar land ownership system, conditioned the intense dedication of the members of the family to this type of farming. Thus, while men developed the tougher tasks such as planting, tillage, pruning, harvesting and working in the traditional drying floors, women were involved in the picking of branches, in the removal and selection of raisins and in the process of rotating the bunches in the traditional drying floors^{xxi}.

2 National and international importance of raisins

The main world raisins producers areⁱ Turkey (28%) and United States (21%), followed by Iran (13%), China (12%) and Chile (6%). The European Union is not a major producer but represents 33% of the world consumption, ahead of the major national markets of the US and Turkey, with a world consumption share of 13% each; and China, that represents 10% of the world consumption.

The leading raisins producer in the European Union is Greece but it accounts for only 3.7% of world production. It is a sector with a clear exporting nature (mainly currants), but whose production has decreased by 35% since 2000. The United Kingdom is the fourth world consumer of raisins, representing 7% of the total, followed by Germany (4%), the Netherlands (3%) and Greece (2%).

The importance of Spain in the European Union raisins sector is very small. The production is small (it represents 0.1% of Greece production) and it is focused on the Muscatel variety. This variety is suitable for three purposes: as table grapes, for wine production and raisins production. Hence the quantity dried each year depend on the market demand.

There is no specific section for Muscatel raisins marketing statistics so, the only figures available are those provided by the Regulating Board of the Protected Designation of Origin “*Pasas de Málaga*” (Málaga raisins) for the type of raisins selected and which comply with the specifications. In 2015, of the raisins produced in Málaga (300 tons), only 151 tons were marketed under the Protected Designation of Origin, of which 91% were for the Spanish domestic market and the rest was exported. The destinations of the raisins exported under the Protected Designation of Origin were the United Kingdom (86%) and Japan (14%).

Therefore, the production of raisins in Málaga is minor compared to the productions of other areas. However, it is a unique product due to the organoleptic characteristics that it has due to the particularities provided by the variety itself as well as a result of its production system: it is completely natural sun-dried in traditional drying floors (*paseros*) that are adapted to the ground. A proof of this is that in the XIXⁱⁱ century, there were four different raisins products at world level:



Fig. 5. *Málaga raisins*

dried grapes, Archduke (bleached raisins), currants (Corinth raisins) and raisins. Raisins are the ones with the higher quality and they exclusively refer to Málaga raisins.



Fig. 6. Málaga raisins (left) and currants (also known as Corinth raisins) (right)

a Organoleptic characteristics and nutritional elements of Málaga raisins.

The organoleptic characteristics of Málaga raisins are the result of the combination of the biotic and abiotic factors of the environment along with the traditional grapes-drying process. These organoleptic characteristics of raisins are recognized and protected at EU³ level through the Protected Designation of Origin "*Pasas de Málaga*" (Málaga Raisins)⁴.

The traditional «*Pasas de Málaga*» are obtained as a result of sun-drying ripe grapes of *Vitis vinifera* L., Muscatel of Alexandria variety, also known as Muscatel Gordo or Muscatel de Málaga, an ancient variety with a high natural sugar content and with a high concentration of aromatic content that give raisins a distinctive aroma and flavour.

They are large raisins, clearly distinguishable from other products of their category such as Sultanas or currants, produced in other parts of Spain or Europe. Málaga raisins have a purplish black uniform colour, characteristic of the natural sun-drying process, compared to the reddish or clear colour typical of those raisins early harvested or artificially dried. They have a rounded shape and the pedicel (short stem that connects the berry to the bunch) may remain when grapes are removed from the bunch manually. The skin has a medium thickness.

The degree of moisture is less than 35%. It has a sugar content greater than 50% w/w. Its acidity ranges between 1.2 and 1.7% in tartaric acid, while its pH ranges between 3.5 and 4.5. Water-soluble solids are greater than 65°Brix.

Raisins keep the characteristic muscatel flavour of the grapes from which they are produced. Moreover, this flavour is enhanced by an intense retronasal aroma dominated by aromatic herbs, roses, geranium and citrus aromas. The degree of acidity helps to create a specific sweet-sour balance. Given that raisins are produced from berries that do not undergo any treatment that impairs the skin, they have a skin of medium thickness. The medium size, degree of moisture and Brix value give raisins an elastic and flexible texture; the pulp feels fleshy and juicy in the mouth; all of them tactile sensations which are the opposite to the dry and inelastic characteristics that dried fruits often have.

³ Implementing Regulation (EU) No. 579/2013 of the European Commission of June 17 2013, by which a designation is registered in the list of Protected Designations of Origin and Protected Geographical Indications [*Pasas de Málaga* (PDO) – Málaga raisins]

⁴ Section B of the Specifications of the Protected Designation of Origin.

The sun-dried process enables to preserve the characteristic flavour and aroma of Muscatel grapes almost unchanged as it allows to keep more moisture and juiciness than raisins dried artificially. This helps them have a pleasant texture and this is why they do not need coatings or additives for preservation.

The traditional nature of the product, together with these characteristics, led Esther Arrebolaⁱⁱⁱ to include raisins in her work to design and create a Catalogue of Traditional Andalusian products linked to a geographical information system. In addition, other previous authors^{iv} who had developed similar catalogues, had also considered raisins as a typical Andalusian food product.

The table below shows the nutritional values of a portion of 40 grams of Málaga raisins⁵.

ESSENTIAL NUTRIENTS	Calories	114.4	Kcal
	of fat	1.5	Kcal
	Total fats	0.2	g
	of which saturates	0.04	g
	Cholesterol	0	mg
	Sodium	20.8	mg
	Carbohydrates	26.4	g
	Dietary fibre	8	g
	Sugar	22.4	g
Proteins	0.56	g	
MINERALS	Calcium	28.4	mg
	Iron	0.6	mg
	Magnesium	16.8	mg
	Zinc	0.04	mg
	Potassium	344	mg
	Phosphorous	44	mg
	Selenium	0.86	mg
	Copper	0.12	mg
	Manganese	0.12	mg
VITAMINS	Thiamin	0.04	mg
	Riboflavin	0.04	mg
	Niacin	0.2	mg
	Vitamin B6	0.12	mg
	Folates	16.000	mg
	Vitamin C	0.92	mg
	Vitamin A: Retinol	0.02	mg
	Vitamin E	0.04	mg
	Vitamin K	14.000	mg
	Pantothenic acid	0.04	mg

Table 1 Nutrition values of a portion of 40 grams of Málaga raisins

The effect of the consumption of raisins on health has not been studied so in depth as in the cases of grapes or wine but there are studies that highlight the benefits of their consumption on health. It is a food product that has high contents of phytonutrients, polyphenols^v, phenolic acids and tannins (as Quercetin, the Resveratrol), with a high antioxidant action, some of which inhibit

⁵ <https://www.campodebenamayor.es/pasas-de-Málaga-moscatel-propiedades/>

the proliferation of the bacteria causing tooth decay^{vi}. They have a low to moderate glycaemic index, as well as a low insulin index. Its continued consumption has an impact on the reduction of blood pressure and cholesterol. Therefore, raisins reduce the risk of developing diabetes and cardiovascular diseases^{vii}. They are also rich in dietary fibre, vitamins and minerals, in addition to their energy and invigorating contribution which make them an important element of a healthy diet.

b Regional initiatives

The Autonomous Community of Andalusia, in the framework of the legislative powers conferred to it, has protected the cultivation of grapes for raisins, as well as certain cultural elements that this system provides to the Andalusian bio-cultural diversity. The recognitions of Andalusia to raisins and their cultural environment are listed below.

i Recognition as Protected Designation of Origin.

In 1614, a brotherhood for vine-growers called *La Hermandad Gremial de Viñeros* was formally created. Its religious spirit still remains in the *Muy Ilustre Antigua y Venerable Hermandad Sacramental de Nuestro Padre Jesús Nazareno de Viñeros, Nuestra Señora del Traspaso y Soledad de Viñeros y Lorenzo Mártir*. However, regarding its commercial approach, in 1933, the brotherhood was substituted by the Regulating Board of the Protected Designation of Origin of Málaga to deal with and protect the interests and needs of the sector.

In 1771, an organisation called “Montepio de viñeros y cosecheros de Málaga” was created to defend and protect vine-growers.

In 1996, the Protected Designation of Origin “*Pasas de Málaga*” (Málaga raisins) and its Regulating Board⁶ were recognised. In 2010 and after the publication of Regulation EC 510/2006, on the protection of geographical indications and designations of origin of agricultural and food products, the Regional Ministry of Agriculture, Fisheries and Rural Development of Andalusia decided to submit a proposal to register the raisins produced in Málaga in the European List of Protected Designations of Origin. After that, their Specifications⁷ were published. Finally, in June 2013, the European Commission approved the registration of the Protected Designation of Origin “*Pasas de Málaga*” (Málaga raisins) in the list of Protected Designations of Origin⁸.

This is the way to protect the raisins produced in Málaga that, having the characteristics defined in the Specifications of the Protected Designation of Origin, meet all the requirements. Specifically, raisins must be ripe berries of the Muscatel of Alexandria variety which must have been grown in the municipalities mentioned in the Specifications of the Protected Designation of Origin⁹ and naturally sun-dried. They must have the traditional physical, chemical and organoleptic characteristics of Málaga raisins¹⁰; and, they must be processed and packaged in

⁶ Order of November 6, 1996, which approves the Regulation for the Protected Designation Of origin Pasas de Málaga (Málaga raisins) and its Regulating Board. BOJA (Spanish acronym for the Andalusian Official Gazette) No. 135.

⁷ Order of September 15, 2010, by which a positive decision in relation to the request for the registration of the Protected Designation of Origin “Pasas de Málaga” in the corresponding register, is issued.

⁸ Implementing Regulation (EU) No. 579/2013 of the European Commission of June 17, 2013, by which a designation is entered in the list of Protected Designations of Origin and Protected Geographical Indications [*Pasas de Málaga* (PDO) – Málaga raisins]

⁹ Section C of the Specifications of the Protected Designation of Origin.

¹⁰ Section B of the Specifications of the Protected Designation of Origin.

the same area where they have been grown¹¹. Finally, they must be naturally sun dried and this is why any artificial way of drying is not allowed¹².

With this recognition it is intended:

1. Maintain grape production according to traditional cultivation practices.
2. Protect the handcrafted production of the Raisins of Málaga.
3. Monitoring compliance with the requirements of the Specifications and certifying the product and promoting and controlling the quality of the product.
4. Finally, encouraging the promotion, training, research and development of those markets related to the grape raisins.

The Protected Designation of Origin gives the products a notoriety in the markets, which favours the improvement of the income associated with the product and, therefore, the conservation and maintenance of the means of production. Thus, the Protected Designation of Origin creates an added value that allows the maintenance of the productive infrastructures necessary for the transformation of the product in the natural environment.

On the other hand, the Protected Designation of Origin confers an identity character linked to the terroir, acting like an engine for the maintenance of the traditional techniques of cultivation in slope. So, the specification of the Denomination of Origin requires maintaining a maximum planting density of 5,000 vines/hectare; the maximum production per hectare must be 8,500 kilos, which avoids processes of productive intensification; likewise, it establishes the number of buds seen per vine, as well as the number of thumbs per arm, which affects the process of pruning and vine formation; all this has a positive effect on the maintenance of the wine-growing landscape.

Likewise, and as it is commented in the section in which the landscape is analyzed (see Landscapes and Seascapes Features) the wineries and paseros are an essential element in the configuration of the traditional landscape of the Axarquía. In the Designation of Origin document the artificial drying of the grape is prohibited, establishing that it must be dried by direct exposure to the sun and that the process must be manual, daily monitoring and in which the farmer must turn the clusters stretched so that the drying is homogeneous on both sides of it. That is, the figure of protection, favours the preservation of the paseros as places for the sunning of the grape, which has a direct impact on the maintenance of the system and the associated landscape.

The **uniqueness** of the system lies both in the process of grapes growing in an area with adverse orographic conditions and in the sun-drying system without undergoing any physical or chemical treatment different from natural exposure to the Sun. So, the orography, the activity associated with the crop and the drying system, make up the landscape of the Axarquía.

ii Intangible heritage of Andalusia

The Atlas of Intangible Heritage of Andalusia^{viii} aims at registering, documenting, disseminating and preserving the intangible heritage of Andalusia. It aims to highlight and promote an image of Andalusia little known and undervalued in order to allow the Andalusians identify themselves with expressions of their cultural heritage.

The records of this Atlas related to the raisins production system and their cultural environment are listed below:

¹¹ Section C of the Specifications of the Protected Designation of Origin.

¹² Section E of the Specifications of the Protected Designation of Origin.

1. Vine growing in La Axarquía.

Code ¹³ :	4702016
Designation:	Vine growing in La Axarquía
Thematic area:	Jobs and Knowledge
Category:	Vine growing

It represents the recognition of vine growing in the area as a traditional crop that has shaped the uneven hilly landscape of La Axarquía and whose product, Muscatel grapes, characterises the grapes production of the area.

2. Raisins production.

Code ¹⁴ :	4702017
Designation:	Raisins production
Thematic area:	Jobs and Knowledge
Category:	Food production

Along with the production of wine, one of the most significant productive activities in the district of La Axarquía is the production of muscatel grapes. This activity, rather than just defining a way to treat and develop raw materials, has defined a landscape and an important part of the calendar (both agricultural and holiday) of the area.

3. Iron working.

Code ¹⁵ :	4702023
Designation:	Iron working
Thematic area:	Jobs and Knowledge
Category:	Iron working

The work developed by blacksmiths is characterized by the transformation of mineral substances (iron, copper or steel) into different farming tools and this is why this job was spread across the area. However, although many blacksmiths who worked with the forge have abandoned the job, this has not happened in the municipality of Almáchar as blacksmiths continue developing a lot of farming tools.

4. *Cante de la zambomba*¹⁶ in La Axarquía

Code ¹⁷ :	4703010
Designation:	<i>Cante de la zambomba</i> in La Axarquía
Thematic area:	Means of expression
Category:	<i>Romances and coplas</i> ¹⁸

¹³[http://www.iaph.es/patrimonio-inmaterial-andalucia/malaga/borge-\(el\)-,almachar,-iznate,-moclinejo/cultivo-de-la-vid-en-la-axarquia/resumen.do?id=216428](http://www.iaph.es/patrimonio-inmaterial-andalucia/malaga/borge-(el)-,almachar,-iznate,-moclinejo/cultivo-de-la-vid-en-la-axarquia/resumen.do?id=216428)

¹⁴[http://www.iaph.es/patrimonio-inmaterial-andalucia/malaga/almachar,-borge-\(el\)-,moclinejo/produccion-de-pasas/resumen.do?id=216332](http://www.iaph.es/patrimonio-inmaterial-andalucia/malaga/almachar,-borge-(el)-,moclinejo/produccion-de-pasas/resumen.do?id=216332)

¹⁵<http://www.iaph.es/patrimonio-inmaterial-andalucia/malaga/almachar/herreria/resumen.do?id=216280>

¹⁶A zambomba is basically an upturned bottomless flower-pot with a drum-skin stretched across one end and a hole in the middle through which a pole fits. To produce the instrument's low zam-bom, zam-bom sound the player spits on his or her hand and moves it up and down the pole.

¹⁷<http://www.iaph.es/patrimonio-inmaterial-andalucia/malaga/almachar,-canillas-de-albaida,-iznate,-torrox,-vi%C3%B1uela/cante-de-la-zambomba-en-la-axarquia/resumen.do?id=216298>

¹⁸Romances and coplas are poetic forms found in many Spanish popular songs

This festival is carried out in the fields and hardly ever in the village. It was a typical celebration of rural life.

5. *Coplas y baile de la rueda*¹⁹ in La Axarquía.

Code ²⁰ :	4703012
Designation:	<i>Coplas y baile de la rueda</i> in La Axarquía
Thematic area:	Means of expression
Category:	Dances and <i>coplas</i>

It is one of the most widespread dances of the region. It is not bounded to a particular festival although it can be seen in different festivals throughout the year in the different municipalities.

3 Historical importance

Grapes have been grown along history. This has established the bases of a traditional way of life and has showed how human kind has adapted the environment, thus leaving an imprint in the landscape, in the way of life and in the economy of the group.

The region of La Axarquía (Málaga) is the main raisins producing area in Spain and the grapes grown are of the Muscatel variety. The references to the link between this product and the geographical area in which it is produced are ancient. Although the first references to this product date back to Phoenicians times, there were not many records that confirm the existence of a settlement and the development of agricultural activities in the area until the Muslim period. In the 10th century, the area was famous for silk, raisins, figs, cane of sugar, etc.^{ix} and at that time, it already had the farming systems that nowadays still characterise the agricultural landscape of La Axarquía. The organisation of the settlements corresponding to the Muslim civilization (8th to 15th centuries) determined most of the features of the agricultural landscape of La Axarquía and Montes de Málaga, which lasted till the end of the 19th century^x.

Vines have historically defined the geographical and landscape personality of La Axarquía. Even before the Nasrid dynasty of Granada, during the 13th, 14th and 15th centuries, vines became the most profitable crop of the area due to its yields and soil conditions.

The settlement of Christians and the expulsion of the Moors did not introduce major changes with respect to the ownership of the land and the farming system. The resettlement initiated by Christians aimed to reactivate the agricultural economy and, to do this, new settlers were ordered to cultivate the land in accordance with the traditions of the country; this meant that trees could not be cut or removed under penalty of losing the land and, tillage was authorized in unused land^{xi}. From the 17th century on, this situation, along with the fiscal and strategic interests of the Crown, resulted in a settlement approach based on expansion and this district was an especially attractive area for family agriculture of self-supply.

Many authors confirm the importance of the vine-growing economy of Málaga during the 17th and 18th centuries when vines occupied only the mountainous areas because King Carlos II dictated that vines had to be exclusively planted in areas inaccessible to ploughs^{xii}, so many municipalities of La Axarquía continued growing this monoculture.

During the 16th, 17th and 18th centuries, vines experienced a favourable situation that made them become the engine of the economic development of the area. This was evidenced by

¹⁹Rueda means "wheel" in Spanish. In this dance, participants are part of a circle, hand in hand.

²⁰[http://www.iaph.es/patrimonio-inmaterial-andalucia/malaga/almachar,-borge-\(el\),-canillas-de-albaida,-iznate,-torrox/coplas-y-baile-de-la-rueda-en-la-axarquia/resumen.do?id=216406](http://www.iaph.es/patrimonio-inmaterial-andalucia/malaga/almachar,-borge-(el),-canillas-de-albaida,-iznate,-torrox/coplas-y-baile-de-la-rueda-en-la-axarquia/resumen.do?id=216406)

"*Vendeja*^{xiii} *de la cargazón*" a period at the beginning of September in which many foreign ships arrived to the towns of the coast of Málaga to load raisins, wine and almonds, and also by the "*Rompimiento*" or establishment of annual prices for raisins in order to load them onto boats. This was done by the city of Málaga according to the privilege granted by the King Felipe IV in 1628. The criteria for fixing prices took into account the production and the quality of raisins and it was used as a fiscal reference for the payment of royal and municipal taxes, although it hardly influenced the price paid to producers, which completely depended on the amounts that traders and wholesalers gave them in advance as a credit (even before the first farming tasks). Therefore, they obtained a price substantially lower than the price fixed by the *Vendeja* for ship's masters, which only benefited warehousekeepers and traders. This is why, in 1717, a Royal Decree setting the end of the monopoly and successive regulations seeking to avoid the purchases in advance carried out by traders, tried to put an end to the dominant position held by just a few families and to the harm caused to rival cities like Vélez (which had earlier grapes and could obtain better prices than Málaga just in case there were freedom of shipping and they were not obliged to wait for the *Rompimiento*). The analysis of prices shows that higher prices were registered in the months of September and October, going down as the *Vendeja* progressed.

The greatest moment of this crop was reached at the end of the seventies of the 19th century, when it dominated all of the theoretically usable surface thus becoming almost a monoculture. There was a clear relationship between grapes growing and the rugged topography.

Vines climbed mountains and penetrated new lands. Starting from Vélez Málaga, they reached Canillas de Aceituno and, through the foothills of Sierra Tejada and from Colmenar, they reached Comares, invading various nuclei of the West coast (Marbella and Estepona). Therefore, a way of life linked to the cultivation and export of raisins was created, a fact that made this area of Málaga one of the most benefited from nature. This generated an intense commercial activity in the city of Málaga, which became the engine of Málaga's industrial progress in the second half of the 19th century.

This development was produced thanks to the existence of an abundant labour force as a consequence of the population growth that occurred from the end of the 15th century to the beginning of the last quarter of the 19th century. Otherwise, land use in such adverse conditions would have been very difficult.

This advantageous agriculture based on the marketing of wines and raisins from Málaga was developed until the beginning of the last quarter of the 19th century, when the coincidence of different factors caused the sector to collapse. Factors such as the fall of prices due to the increase of production, powdery mildew (plant disease), the competition of currants (the seedless Corinth variety) and, finally, the invasion of phylloxera (plant disease) in 1878, definitely ruined the vineyards of La Axarquía.

Phylloxera (*Vitifoliae vitifoli*, Fich) had a special peculiarity. It did not affect the production of a particular year (as powdery mildew did), but the whole life of the plant, which was irretrievably destroyed in a period of three to four years.

As the area of La Axarquía was especially focused on this crop, it could hardly resist the entry of phylloxera and the resulting destruction of vineyards. Phylloxera appeared in 1878 in Moclinejo, in a farmhouse called "La Indiana". It provoked the disappearance of the crop in fourteen municipalities^{xiv} and caused a deep economic crisis that destabilized the very foundations of the way of life of the area, thus creating a profound social upheaval that led to an intense migratory flow which affected, at the same time, all the municipalities of inland and coastal areas, a fact that proved the existence of a strong regional unity.

Since that time, the difficulties arising for the reconstruction of production structures characterized by smallholdings where there were low incomes to face the high costs of replanting, together with the loss of market due to the recovery of other vine-growing regions, led to an unstable survival status until 1960. Vine growing was limited to the furthest municipalities forming a kind of bow that surrounded the river plain of Vélez-Málaga, in which the replacement of this agricultural activity by others crops was practically impossible.

Throughout this lengthy period, vines recovered slowly although they no longer occupied as much land as they did before phylloxera. The current vine-growing area hardly represents 10% of the area before phylloxera. As vine-growing do no longer have any economic interest, this activity has been abandoned or, in the best cases, has played a marginal role in just a few farms that remained from previous periods.

Many farms have been permanently abandoned due to emigration; in others, abandonment has been partial, i.e., they continue producing grapes but only essential tasks are developed, avoiding those ones that are harder and demanding. They are farms with seasonal activity that combine vine growing with other activities^{xv} and they are still playing an important role in the economy and the socio-cultural environment of a large area of the province of Málaga.

It should be noted that the Protected Designation of Origin "Pasas de Málaga" includes a sub-area of production in Manilva, located at the other end of the province of Málaga. Its production of Muscatel grapes is dedicated for consumption as table grapes, for wine-making and some for raisins production. It is one of the few places outside La Axarquía where this variety was used to replant the land after the phylloxera, occupying the highest slopes of the area. However, Manilva developed its own cultural way of relating with vine-growing, different from the uniqueness of the raisins production of La Axarquía.

4 Relationship with European policies

The second pillar of the Common Agricultural Policy is the Rural Development Policy. Although this policy is funded by the European Union, a percentage²¹ has to be co-financed by national governments (in the case of Spain, this co-financing is regional as these powers are transferred to the Autonomous Communities). In addition, this policy also has a regional programme created from a list of measures laid down for the whole European Union. The objective of this rural development policy is to contribute to the strategy of the Union that aims to achieve growth and employment through the promotion of sustainable rural development. Thus, this policy contributes to the development of a competitive and innovative agricultural sector, balanced from the territorial and environmental points of view, also environmentally-friendly and resistant to climatic changes.

This policy, established for multi-annual financial frameworks of 7 years, is implemented through the development of Rural Development Programmes (RDP), in which Member States²² select those measures that they consider important from the set list. Therefore, the implementation of the rural development policy can vary greatly from one Member State to another, and even within a Member State.

Andalusia, greatly concerned about the environmental situation of the raisins producing area, has included environmental measures aimed at improving the environmental sustainability of raisins production in different programming periods²³.

²¹About 20% the funds are national and regional

²²Spain decided to have a RDP per Autonomous Community in order to enable them to choose the best measures to meet their specific needs.

a Accompanying measures in the period 1993-1999

During this financial framework, the agro-environmental support was designed as accompanying measures of the Common Agricultural Policy, as the European Union's Rural Development Policy was not yet articulated around Rural Development Programmes. During this financial period, the accompanying measures for raisins had a great impact in the environmental improvement of La Axarquía and in the maintenance of the crop. With the implementation of this measure, farmers committed to: 1) maintain the traditional raisins production system, 2) eliminate the use of herbicides as much as possible, 3) reduce the use of chemical fertilizers by 50%, 4) sun-dry grapes in the traditional drying floors (*paseros*), 5) not use elements to scare birds, 6) have a record for the farm and 7) annually provide any complementary information requested.

b Rural Development Programme 2007-2013

This financial framework included a measure to support conservation agriculture in vineyards, which aimed to reduce erosion, increase soil organic matter content, preserve water resources as run-off was reduced and fight against climate change. This support was specific for plots of land with a slope greater than 8%, which meant that the entire raisins producing area was eligible for this support.

Among the actions that could or could not be developed, tilling the soil was prohibited; however a green cover (whether planted or spontaneous) was established and, the process used to remove this green cover should be by physical means or using environmentally-friendly herbicides.

c Rural Development Programme 2014-2020

In this current context, an even more specific agri-environmental measure for the raisins industry has been included: "Maintenance of unique systems: chestnuts and raisins".

As stated in the Rural Development Programme of Andalusia^{xvi}, this measure is aimed at maintaining an Andalusian unique cultural system or landscape with a high environmental value, in this case, the one related to raisins production²⁴.

The main objective^{xvi} is:

1. To improve the physical and chemical properties of soil, thus acting against erosion risks.

This has, in turn, the following indirect objectives among others:

1. The conservation of unique landscapes.
2. The reduction of the risk of fire and the impact this has on the conservation of biodiversity, the fight against erosion and improving the quality of surface waters.

The above mentioned Rural Development Programme of Andalusia establishes that the raisins industry has a special importance in Andalusia due to its environmental, landscape and cultural function. The traditional raisin system performs important functions such as the conservation of the environment and rural landscapes, thus being a key element to prevent the environmental degradation of their areas.

²³ In the period 1993-1999, Spain established the support at the request of Andalusia because this kind of support was not still established at regional level.

²⁴ The measure also affects the chestnut sector, although the operations established are different.

Rainfall in the area is scarce, irregular and has a torrential character. This, combined with the steep slopes, represents a high risk of runoff and soil erosion. In addition, this area has dry summers and high temperatures, a fact that causes high evapotranspiration in the summer. All these lead to evident risks of desertification, given the shallow depth and shortage of organic matter in the soil. Therefore, it is necessary to strengthen soil protection using practices that prevent runoff, increase the ability of soil retention and prevent its erosion.

The most suitable agricultural practice for the conservation of this raisins unique landscape is to make little holes at the base of the vine stocks, in the rainy season, that will serve as a "pool", making the function of small reservoirs, in order to retain and absorb all the possible rain water on the ground, thus preventing run-off down the slopes of the hills and reducing erosion during the rainy season. From spring on, the vine stock has to be "arropada" (snuggled up)" in order to try to leave the surface of the soil in its original state, thus closing the ground, to avoid the hot summer temperatures causing soil desertification.

Thus, this practice consists of two actions:

1. The first one based on the development of the little holes at the beginning of December, which is called "fragar" the vine stock
2. The second action is called "arropar" (snuggle up) the vine stock and it is developed at the beginning of March, when the rainy season has finished.

Both the task of "fragar" the vine stock and the one of "arropar" are traditional tasks that are disappearing through time and that are referenced in the applicable legislation²⁵ and in the bibliography^{xvii}.

Fragar the vine stock is a traditional task based on making little holes like a kind of a pool at the base of the vine, by removing the ground around this, so to accumulate water and reduce run-off, thus reducing erosion problems during the rainy season. The hoe is used for this task (see section II1c Other activities that contribute to the standard of living of the region)

Arropar la cepa (Snuggling up the vine stock) is a traditional task that consist of covering the vine stock once the rainy season has finished, thereby protecting the vine stock from the inclement weather of the summer. The hoe is used for this task (see section II1c Other activities that contribute to the standard of living of the region).

Therefore, the measure in force supports, on the one hand, the preservation of traditional farming methods as it rescues the traditional tasks - done with traditional tools – which were disappearing; and, on the other hand, the structure of the landscape, as it is a good practice to improve the physical properties of the soil, thus preventing erosion.

5 Agricultural values

Orographic and soil characteristics have determined the agricultural use of the land since ancient times. The areas where vines are grown, away from plains and the coastline, are areas with shallow soils of shale and slate in decomposition, poor in nutrients and organic matter, with steep slopes and prone to water erosion produced by the torrential (although few) rains that characterise the Mediterranean climate. In this environment, where most of the land is used as grazing land, only deep root crops have been planted. This is why where Muscatel grapes (one of the oldest and most widespread varieties) have found here their place. Moreover, as they can

²⁵ Article 1 of the Order of April 6, 2017, by which the Orders of May 26, 2015 are modified, by which the regulatory bases for granting subsidies to Measure 10 are approved in the Autonomous Community of Andalusia: Agroenvironment and Climate, and Measure 11: Organic Agriculture, and the Order of April 14, 2016, whereby the regulatory bases for the granting of subsidies to Measure 13 are approved in the Autonomous Community of Andalusia: Payments to areas with limitations natural or other specific limitations.

be used for three different purposes, they have become the main source of income and complement of the economy of local people, being a unique product as steep slopes allow the plant to wholly receive the rays of the Sun. This is done in synergy with the natural landscape that surrounds them, giving shelter and greenery to vertebrates and invertebrates in the hot summer months.

The importance of maintaining vineyards to keep the ecosystem balance and prevent erosion has become evident in those vineyards abandoned in recent times as the recovery of the natural tree flora has been almost impossible. Just some herbaceous plants and shrubs of small-size, with very little run-off water retention capacity, are able to recolonize those areas previously cultivated.

Vine growing is an important economic activity in the area as it is developed on land that could hardly have other uses. Moreover, vine growing uses techniques aimed to fight against soil erosion and to retain run-off water (walls of dry stone, holes in the foot of the vine stock, plantations along level lines, etc.) thus maintaining and optimizing the use of the resources available. Agricultural tasks are all carried out manually as steep slopes do not allow to do it mechanically. This means that this activity employs a large number of people in key moments of the cultivation process, mainly family members, thus generating an important demand for labour force. It is a production system which does not use inputs, keeps ancient traditions and structures the social relations of the region.

One of the peculiarities of the system, that makes it unique in the world, is that grapes are naturally sun dried without undergoing any physical or chemical pretreatment. Grapes are dried under attentive daily care such as covering them with awnings at night to prevent moisture from dew.

The **environmental sustainability** of the Málaga Raisin Production System in La Axarquía is evident both in grapes production tasks and in the process used to produce raisins.

a The vines of La Axarquía to fight against climate change

There are data available on temperature and precipitation from the agroclimatic station Vélez-Málaga²⁶ located next to the raisins producing area. Taking into account that this is an excessively short period (just fifteen years) and highlighting the fact that this paper is not intended to obtain any kind of scientific conclusion about the evolution of temperature and precipitation – because otherwise it would be necessary to conduct a scientific study - It seems that, in line with the majority of research being carried out worldwide concerning climate change and the predictive models under evaluation, the temperatures in the area tend to rise. Both maximum and minimum annual temperatures tend to rise in the period analysed, more the former than the latter. Therefore, the thermal range between the two (difference between the maximum and minimum annual temperature), also tends to rise.

²⁶ Latitude: 36° 47' 45" N; Longitude: 04° 07' 53" W

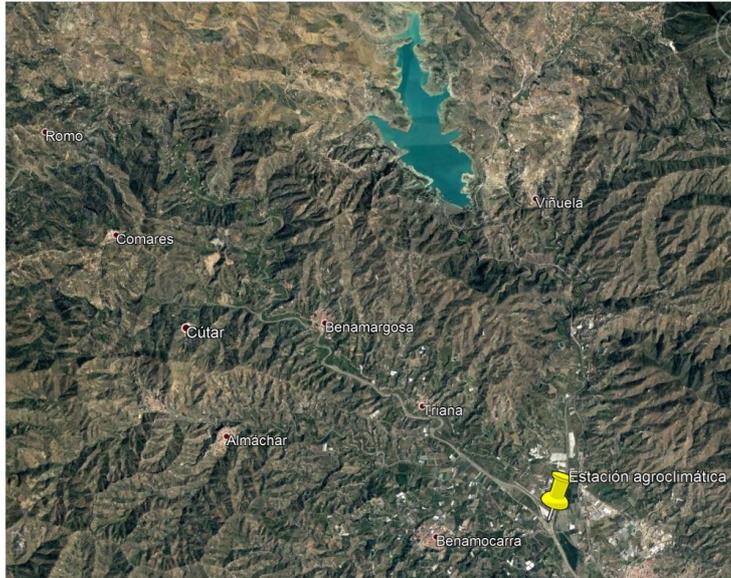


Fig. 7. Location of the agroclimatic station



Fig. 8. Maximum and minimum annual temperatures; Precipitations.

Moreover, if the rainfall of the last 15 years is analysed, they show a downward trend although there are no data available from the 2005 period in which Andalusia suffered an extreme drought.

The increase in temperature brings vine's phenology forward and causes that the bunches ripen at higher temperatures, thus affecting the composition of the harvest. Therefore, vine growers are forced to bring the harvest and the beginning of the tasks developed in the traditional drying floors forward.

The following table shows the data available in the Regulating Board on the earliest dates of start and end of the tasks developed in the drying floors. It can be noted that, in recent years, the start of the drying process has been brought forward to the month of August, while its end has been shifted to the last days of the month of September.

CROP YEAR	Earliest date of the start of the tasks developed in the drying floors	Earliest date of the end of the tasks developed in the drying floors
2013	06/09/13	16/10/13
2014	16/08/14	23/09/14
2015	19/08/15	06/10/15
2016	26/08/16	06/10/16
2017	13/08/17	30/09/17

Table 2 Earliest dates of the start and end of the tasks developed in the drying floors. Source: Regulating Board

Moreover, after consulting stakeholders, they believe that in recent years the slight increase in temperature is not only influencing the shift of the harvest date; however, it is leading to the absence of fungal diseases (mildew and powdery mildew), and the rise in the incidence of the *Empoasca vitis* (kind of leafhopper).

After consulting the RAIF (the Spanish acronym for the Network for early warning and plant information of the Regional Ministry of Agriculture, Fisheries and Rural Development of Andalusia available at <https://www.juntadeandalucia.es/agriculturaypesca/raif/>), and, specifically, the biological area of La Axarquía-North, where there are eight biological control stations, 4 in Almachar 4 and 4 in El Borge, the data obtained are the ones shown in the diagrams below. They seem to prove a certain decline in fungal diseases and a true rise of the presence of leafhoppers.

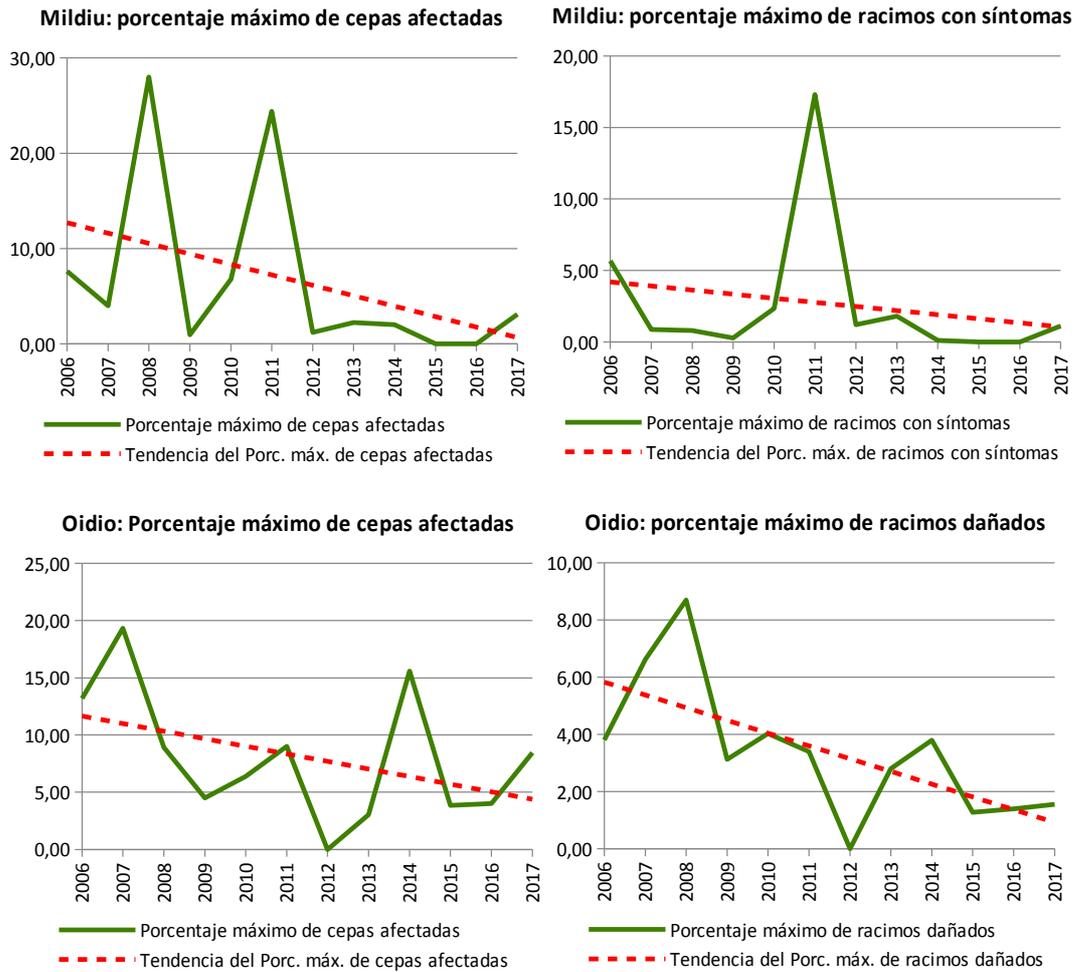


Fig. 9. Percentage of mildew and powdery mildew in the area of La Axarquía. RAIF

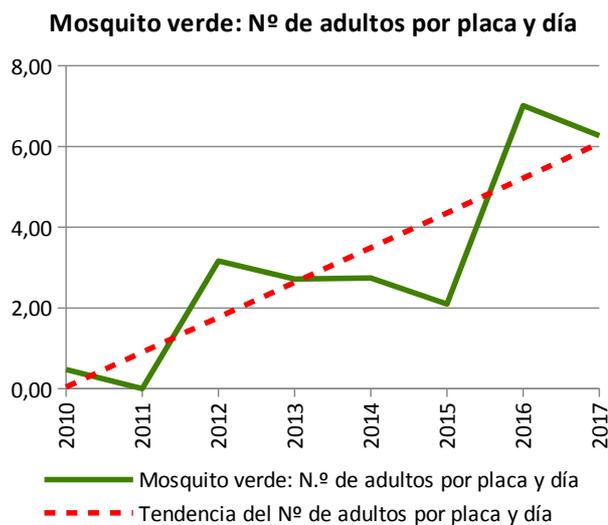


Fig. 10. Incidence of leafhoppers

Recent research carried out on vines parcels of La Axarquía^{xviii} ^{xix} confirm that the erosive processes that occur in the cultivated slopes are very variable. This means that tillage tasks should be well planned according to the rainy period, the increase in temperature and, above all, the direction of runoff. If these processes are altered by climate change, growers may not foresee these tasks. The recommendations made to growers are: to protect the soil with vegetation²⁷, not to remove the soil when rain is expected and make a precise design in the direction of drainages^{xx}.

Based on the data analyzed and the reservations made, it can be stated that if the scientific recommendations were incorporated, together with actions established in the agro-environmental measure of the Rural Development Program of Andalusia (see section Rural Development Programme 2014-2020), the system could reasonably support the possible impacts of climate change and, in any case, it seems clear that its existence and preservation in the current conditions, contributes positively to the conservation of agricultural, biodiversity and other values of the area.

6 Cultural values

Vine growing and the traditional drying floors (*paseros*) have been the basis for the formation of households for centuries. In a rural subsistence economy, young couples settled in small buildings annexed to the traditional drying floors given in dowry to spur the economy of the emerging family. Muscatel grapes were used, when fresh, as a table fruit that completed the contributions of other products grown in the subsistence orchards of families. When dried in the Sun, grapes increased their durability and allowed to consume them in other times or to market them in other markets. Moreover, both fresh and dried, they were a fundamental element in the production of the unique wines that characterise the area.

When families can afford to move to villages (due to the improvement of the standard of living and communications), the traditional drying floors remain the place of reference of families where all members of the family move to participate in the most delicate tasks of the year: harvest, transport and putting the grapes in the traditional drying floors. Today, as vine stocks are aged and produce lower yields, family labour is what makes farms profitable.

As the traditional drying floors and farmhouses are dispersed over the territory, they generate not only a rich visual landscape with their white triangles and rectangles, but also a cultural environment. Families celebrate that they leave their daily life in the village with a festival: a tradition that is nowadays remembered in the Festival of the Muscatel grape of Iznate. Long ago, they celebrated the moment when they picked the raisins from the drying floors with bonfires to which they invited the families of nearby farmhouses so, this is why these parties promoted meetings between young people. All of this has influenced the diversification of the oral tradition of songs and has generated its own lexicon. Nowadays, the rituals and traditions are transmitted and perpetuated through certain local festivals such as the Festival dedicated to vine-growers in Moclinejo or the Raisins day in El Borge.

7 Functions, goods and services provided by the system

In La Axarquía, landscape (modified by human kind but still amazingly beautiful) consists of hills covered with the green colour of almond and olive trees and vineyards, with streams that create gullies and give life to small valleys. This landscape is characterised by the white structures of the traditional drying floors that produce the main landscape contrast. These traditional drying

²⁷These are vegetation patches (herbaceous and leguminous plants, etc.) located in the higher and medium parts of the slope, where water begins to run, with a size between 1 and 4 m².

floors (light rectangular ground structures with a triangular wall at the back located on mountaintops hillsides oriented to the South-south-west to maximize the number of sunshine hours) are accompanied by a series of buildings (farmhouses) which are used to accommodate the families and animals that move to the field at the time of harvest and grapes-drying period. The architecture of farmhouses and of all those structures that compose them are examples of evolution and of how the needs and characteristics of the area and the system have been met and this is why they create the landscape of the region. The characteristics of the terrain and the crop have favoured, from long ago, this landscape made up of houses scattered, almost isolated, with their specific architecture.

The farmhouse always consists of: a shaded outdoor area where grapes are removed from the stem when they already dried (this process is called *picado*), an elongated room that is used to accommodate the family and as kitchen and, finally, an area for those pack animals that carefully transport the grapes from the rugged vineyards to the traditional drying floors where grapes are classified before putting them in the drying floors (the most important part of the system). Moreover, there are other elements which allow and facilitate family life: an oven, an orchard, retaining walls, a pool and water channelling systems, spaces for storage, etc.

The traditional drying floors, along with vine growing, have been and continue to be a strong link between the population: they do not only set the population to the territory but they also give meaning and unify the sense of belonging to the area.

The group of elements, which has evolved over time concerning its design and function, is part of and characterizes a unique landscape which is also an appreciated tourist attraction, as it is located next to one of the most important tourist destinations in the Mediterranean, the Costa del Sol. This has resulted in the creation and promotion of the use of farmhouses as tourists accommodation,

as well as in the creation of routes and activities which intend to promote the traditions and crafts of the area but, above all, the excellence of the food products produced. Raisins and wine become, again, the engine of the economy and a binding element for society and population to the environment.

The interlink between the production of Muscatel raisins and society is also proven by the maintenance of jobs such as blacksmiths. This job is already lost in other places although in La Axarquía, it continues to provide farmers with the traditional tools needed to cultivate and process the product manually. Moreover, it is also necessary to highlight that unique product presentations and packaging have been designed, some of them with their own lithography, to characterise the product to consumers.

The marketing of raisins has boosted relations with domestic and international markets which demand this product for its quality. Historically, the commercial contacts were made through the major ports and now they are made thanks to the organisation of the sector around cooperatives and under the Protected Designation of Origin "Pasas de Málaga" (Málaga raisins). It is a product that can be found not only in local pantries but also in the cuisine of other



Fig. 11. Drying floor with grapes exposed to the Sun

regions, such as Galicia, and countries such as the United Kingdom or Japan, due to the peculiar flavour that it provides to dishes.

Recently, the doctoral thesis of Laura Domínguez^{xxxiii} highlights the importance and relevance of the Cultural landscape of La Axarquía. This paper includes, among its findings, the necessity of safeguarding and protecting its uniqueness (considered at risk) by using initiatives like GIAHS or UNESCO's Cultural Landscape as well as management and planning actions carried out to favour the maintenance of farmers, who are the real architects of this agricultural landscape.

II Characteristics of the Proposed GIAHS Site

1 Food and livelihood security

Due to soil and climatic conditions and social features, the production of grapes for raisins has been linked to the area for centuries. The first references to Málaga Raisin Production System in La Axarquía date back to the 10th century^{xxi}, although it was just after the Reconquest (1492) when Málaga raisins acquired a high reputation as the monarchs promoted their consumption. During 1561, of the 124 records in which neighbours of the administrative district of Comares appear, 72% corresponded to contracts related to raisins, a fact that shows their importance in rural economy^{xxii}.

The production of raisins brings a twofold positive dimension to the area, on the one hand it acts as a fundamental economic support in the area which is very poor with regards to any other agricultural alternative; and, on the other hand, it acts as key element for the protection of the environment, in an area that, due to its soil and climatic conditions, is very sensitive to erosion.

The expertise needed for the production of raisins is an intangible good, currently facing the danger of disappearing if it is not properly protected.

a Contribution of raisins to the standard of living of the region

Raisins production has, at Spanish and European levels, the highest distinction in terms of the quality of its production: Protected Designation of Origin²⁸.

A Protected Designation of Origin covers food products whose quality or characteristics are based, exclusively or basically, on human factors and/or the natural features of the geographical area in which they have been produced and processed. These products are designated by the name of the geographical area which is protected (Pasas de Málaga - Málaga raisins), so that, its use is unique to those products covered by the PDO. In order to be awarded a designation of quality of this type, it is essential that the production of grapes and the processing and preparation of raisins take place in the geographical area defined by the PDO, and must also meet all the requirements set out in the Specifications. Thus, raisins covered by the Protected Designation of Origin "Pasas de Málaga" can only be produced in the following municipalities and under the requirements laid down in the Specifications of the relevant Regulating Board.

²⁸In accordance with its corresponding Specifications and with the provisions of Regulation (EC) 1234/2007 of the Council, of October 22, which establishes a common organisation of agricultural markets and specific provisions for certain agricultural products (single CMO Regulation); and of Regulation (EC) 510/2006, of the Council, of March 20, 2006, on the protection of geographical indications and designations of origin of agricultural and food products; of law 10/2007, of November 26, on the protection of the origin and quality of Andalusian wines; of law 2/2011, of March 25, on the agri-food and fisheries quality of Andalusia, as well as in the basic provisions of law 24/2003, of July 10, on Vine growing and Wine.

- **Area of La Axarquía:** Alcaucín, Alfarnate, Alfarnatejo, Algarrobo, Almáchar, Árchez, Arenas, Benamargosa, Benamocarra, El Borge, Canillas de Aceituno, Canillas de Albaida, Colmenar, Comares, Cómpeta, Cútar, Frigiliana, Iznate, Macharaviaya Málaga, Moclinejo, Nerja, Periana, Rincón de la Victoria, Riogordo, Salares, Sayalonga, Sedella, Torrox, Totalán, Vélez Málaga and Viñuela.

99.5% of the raisins produced in Spain²⁹ comes from the areas of La Axarquía and Manilva although most of the area, 94%, is located in La Axarquía. In 2015, 1,267 tons of fresh grapes for raisins were produced and they resulted in 300 tons of raisins and an economic value for farmers of €1,350,000, generating 95,500 daily wages.

This production is handled in the 7 raisins industries registered in the Regulating Board that can certify their production as raisins under the Protected Designation of Origin. Additionally, in the province, there are 18 companies³⁰ that sell raisins and nuts in general.

This handling and subsequent marketing of raisins generated a total of 947 daily wages in 2015; jobs which are mainly concentrated in the months of October and November, in which raisins are selected, graded and packaged.

Agriculture is the main source of employment of the municipalities that produce grapes for raisins. In 2016, 5.8% of the people affiliated to the Spanish Social Security system in the province of Málaga were in the Agriculture Scheme, while in the district of La Axarquía³¹, this percentage was 19.2%. Despite this difference between districts, if the main raisins-producing municipalities³² (El Borge, Almáchar and Cútar) are analysed, the differences are accentuated, obtaining that 66%, 76% and 61%, respectively, of the people affiliated to the Spanish Social Security system were in the Agriculture Scheme, far above the provincial or regional average; a fact that highlights the dependence of these areas on agriculture.

In the area of La Axarquía, 1,350,000 daily wages (5,923 of annual working units) are generated every year and 7.1%, (95,500) are directly generated by raisins production. However, this importance increases in the main producing villages. Thus, in Almáchar and El Borge, raisins represent 58% and 52% of the agricultural employment, respectively; while in other municipalities such as Árchez, Macharaviaya or Manilva this percentage is around 30%³³. These data highlight the importance of vine growing to complement agricultural incomes in the main producing municipalities.

Moreover, they are municipalities which suffer high unemployment rates in general and, agricultural unemployment, in particular. In 2015, 2.8% of unemployment in the province of Málaga was associated with agriculture. If the district of La Axarquía³⁴ is analysed, this figure

²⁹ According to the Statistics Yearbook of 2016 of the Spanish Ministry of Agriculture, Fisheries, Food and Environment, 6 hectares of grapes for raisins production (without indicating the variety) were located in Alicante, representing a total production of 27 tons. It is a very marginal and non-regulated production that is not marketed every year.

³⁰ Register of Agricultural Industries. Regional Ministry of Agriculture, Fisheries and Rural Development of Andalusia.

³¹ In order to calculate the agricultural employment of the area of La Axarquía, the municipality of Málaga has not been taken into account as it is the capital of the province and it has less than 3 hectares of grapes for raisins and a high number of inhabitants working in others activities and this information would distort the rural reality of the region.

³² El Borge, Almáchar and Cútar, represent more than 52% of the surface dedicated to vine growing in the area, according to single payment declarations of 2015 of the Regional Ministry for Agriculture, Fisheries and Rural Development of Andalusia.

³³ Data from the Agricultural census of 2009 and from the estimation of labour force per hectare for the cultivation of grapes for raisins

³⁴ In order to calculate the agricultural employment of the area of La Axarquía, the municipality of Málaga has not been taken into account as it is the capital of the province and it has less than 3 hectares of grapes for raisins and a high number of inhabitants working in others activities and this information would distort the rural reality of the region.

rises to 5% and if villages like Alfarnatejo, Algarrobo and Benamocarra, among others, are considered, that percentage exceeds 10%, reaching, in some cases, 13%.

The production process is subject to a strong seasonality. Family labour force is mainly used in the whole process although if there is not enough people available in the family, eventual workforce can be hired. Moreover, pack animals (and their caregivers) are procured to transport the grapes harvested through steep slopes.

Smallholdings are the most prominent feature of the agricultural structure of the region. They are small and family farms.

In the area, there are 1,016 producers registered in the Regulating Board, with a total producing area of 1,272 hectares distributed in 2,969 plots. The average area by holding is about 0.43 hectares and each producer has, on average, 2.9 holdings and 1.25 hectares³⁵. In 2015, just 3% of the holdings had a size greater than 3 hectares³⁶.

The production of this area is transformed into raisins in 4,593 drying floors³⁵, representing a total surface of 18 drying hectares, having each producer an average of 4.5 drying floors.

In terms of the slope of the area, the Utilised Agricultural Area shows an average gradient of 41%; average gradient that increases up to 46% in those areas where grapes for raisins are grown.

The low yields and the small size of the properties do not guarantee the food supply of rural families. However, they are a complement to the family economy and a link between them. In this sense, the **economic sustainability** of the Málaga Raisin Production System in La Axarquía, - economically supported by the common agricultural policy – cannot be considered without taking into account **social sustainability**.

The economic crisis experienced at the beginning of the 21st century has proven the importance of this system to set population in rural areas as it acted as a catalyst for the creation of jobs and the provision of resources for those families who maintained the plots and the drying floors used to sun-dry grapes and who returned to them when employment in other sectors vanished drastically.

In this line, protecting the production of raisins involves setting population in rural areas, especially in the area of La Axarquía, where population indices show clearly lower values compared to the Andalusian average, as a result of the few alternatives to raisins production that exist. By 2015, the average population density³⁷ of the province of Málaga was 226 inhab/km² and, the population density of the area of La Axarquía³⁸ stood at 200 inhab/km², while the density of the main raisins-



Fig. 12. Farmer developing tasks in an agricultural plot

³⁵ Data provided by the Regulating Board of the Protected Designation of Origin according to the data of its records.

³⁶ Single payment declarations of 2015 of the Regional Ministry for Agriculture, Fisheries and Rural Development of Andalusia.

³⁷ Source: Spanish Institute for Statistics.

³⁸ In order to calculate the agricultural employment of the area of La Axarquía, the municipality of Málaga has not been taken into account as it is the capital of the province and it has less than 3 hectares of grapes for raisins and a high number of inhabitants working in others activities and this information would distort the rural reality of the region.

producing municipalities³⁹, El Borge, Almáchar and Cútar, stood at 40, 130 and 31 inhab/km², respectively, what means a reduction of population density of 83%, 43% and 86%, respectively, compared to the average of the province.

In short, the raisins-producing area is an eminently agricultural territory with a high dependence on the jobs created by agriculture, with an unemployment percentage greater than the average provincial unemployment rate and a population density below the provincial average. In this area, vine growing plays an important role as a complement to agricultural incomes and as a cornerstone of rural society.

b Other agricultural uses

Málaga Raisin Production System in La Axarquía is, due to the geographical conditions of the area, one of the few viable crops in the area and it has had an important influence in the design of the landscape for centuries, becoming a key element of the identity of the district.

Growing other crops different from vines in the area is very difficult because soil is shallow (especially in areas of steeper slopes) and there are other factors such as a high rate of erosion, a dry climate and steep slopes. The only crops existing in the area are those who have similar characteristics.

If the other land uses that coexist with raisins farms are analysed, there are 1,586 hectares dedicated to those other uses. Pastures and grasslands occupy 23% of this surface, together with areas with natural and forest vegetation surrounding farms which play the role of a wildlife refuge. Two of the other crops that are found in the area are: olive trees (they occupy 59% of the surface of other uses) and almond trees (7%). The remaining 10% is occupied by typical orchards of fruit trees which represent the main incomes of farms.

However, in the municipalities of Almáchar, El Borge and Cútar, the surface occupied by other crops in those farms which grow grapes for raisins, does not exceed the surface dedicated to vines so, the rest of land uses in such municipalities represents 31%, 34% and 83% of grapes' surface, respectively; a fact that shows the difficulty that exists in those farms to develop other uses.

Therefore, raisins represent a great percentage of the agricultural income of farmers as in the main producing areas there is a scarce presence of other agricultural uses and, in the case they exist, they have low yields.

c Other activities that contribute to the standard of living of the region

There are artisan and industrial jobs directly associated to the production of raisins that are in danger of disappearing. Thus, it is difficult to find blacksmiths who manufacture tools and repair specific tools in their forges.

The tools that are still manufactured in the few forges still existing in the area are:

- Hoes to break up the surface of the ground.
- Peaks to break up the hardest parts of the ground.
- Scissors for pruning.
- *Hachuela* (kind of axe) to chop or cut some parts of the vine stocks.
- Scissors to remove the raisins from the stem.

³⁹ El Borge, Almáchar and Cútar, represent more than 52% of the surface dedicated to vine growing in the area, according to single payment declarations of 2015 of the Regional Ministry for Agriculture, Fisheries and Rural Development of Andalusia.

- Hammers



Fig. 13. Composition of pictures by Beatriz Moreno of different artisanal tools and utensils used in vine growing and in the production of raisins.

The rest of artisanal products, such as footwear for the field, sieves to select the raisins, boxes for packaging; baskets and, in general, various tools made from Esparto grass, steelyard balances for weighing, etc. have already become part of the traditional culture. Most of these tools were made by farmers, thus making farmers become artisans as well. Nowadays, these tools can be bought and the knowledge to manufacture them only remains in the elderly people of the area. Some tools have become part of the traditional culture of the district but most are just utensils shown in museums.

It is easier to find the necessary materials to maintain and repair the drying floors as they just need a few canes, some bricks made up of adobe and plastics for the awnings and the backs of the drying floors.



Fig. 14. Mules used during harvest

All these tasks allowed the creation of jobs at family and at local levels, thus contributing to the rural economy of the area. Nowadays, their presence is minor.

On the other hand, as pack animals are needed in the steepest areas to transport grapes, a series of auxiliary services, such as blacksmiths to shoe animals or those related to the welfare of animals (vets, feeding, etc) are also necessary.

The most widely used animal is the mule. In the raisins producing area, there are a total of 1,401 mules and 737 donkeys that represent 52% and 33% of the ones registered in 2015, respectively, in the whole province of Málaga.

Mules, due to their natural robustness and strength, are still an essential animal for vine growing and grapes harvesting in La Axarquía, a fact that ensures that they are kept in the area as domestic animals, thus generating a livestock activity associated with vine growing, which also affects the economy of the area and creates new jobs.

i Tourism aspects of the system

The growing tourist interest in agricultural landscapes merged with the environment has in this context a thriving market, both during harvesting and also the rest of the year. Therefore, this agricultural landscape with innumerable small farmhouses (with their corresponding drying floors) where population live during harvesting, may be a tourist attraction that might complement the typical beach tourism of the province with rural tourism and activities typical of the inland municipalities of the district.

La Axarquía comprises 31 municipalities, 26 of them located in inland areas, which supply 19% of the tourist accommodation of the district distributed in 62.5% of the establishments. This is because the supply of accommodation in houses and rural houses is concentrated in inland municipalities (81.4% and 89.5% respectively of those existing in the area), while other types of establishments, which are more massive, predominate in coastal municipalities.

An analysis^{xxiii} of the tourist supply and demand in the area has revealed that the type of accommodation for rural tourism supplied by La Axarquía is the one that most increased between 2010 and 2014. Rural houses grew by 53.6%, and rural accommodation by 22.5%. This type of accommodation organises the supply of inland municipalities, representing 89.5% of the total supply.

The inland municipalities with a greater tourist accommodation supply are Frigiliana, Cómpeta, Periana and Sayalonga. All of them together represent 47% of the total inland supply.

The motivation of tourists during their visit to the area for leisure and holidays is very varied. The most important ones are living an experience in La Axarquía, the development of food and wine activities and discovering rural areas and nature. Finding what they are looking for is what motivates them to highly assess their level of satisfaction, mainly in relation to the landscape, accommodation and hospitality. All of them are assessed with ratings greater than 8.5.



Fig. 15. Municipalities included in the Route of the Raisins

From the tourist point of view, the agricultural sector of La Axarquía promotes a creative and experiential tourism aimed at promoting traditional products (food and wine, culture, ethnography) in a more creative way, where tourists have the opportunity to live a unique experience by getting involved and learning the culture and idiosyncrasy of the territory in a more participative way. A clear example is the joint work developed by wine and raisins producers in Almáchar and the so-called **Route of the Raisins**.

The municipalities of Totalán, Comares, Cútar, El Borge, Almáchar, and Moclinejo⁴⁰ made up the 62 kilometres of the Route of the Raisins, in which tourists can enjoy watching those vineyards whose fruits will become raisins.

The Route of the Raisins runs through these beautiful villages among dazzling landscapes, revealing the signs of identity of their people, who are hospitable and hardworking, who have saved one of their traditions, the production of the best raisins in the world. This Route of the Raisins aims to bring the charm of those villages located in a natural environment of outstanding beauty to visitors; villages which have kept their traditions devoting their unstinting efforts towards the future and modernity. Annex 3 Routes of La Axarquía provides further information on other routes in the area.

ii Wine production

Málaga is a very complex wine-producing region since Phoenicians times. It is characterized by a great climatic, orographic and varietal diversity, which gives a value added to the territory, from the oenological point of view, of course, but also from the tourist one, as it offers numerous

⁴⁰ These six municipalities represent more than 55% of the area dedicated to the cultivation of grapes for raisins.

versions of the same product that can be found in a highly varied geography. It is a very heterogeneous territory where there are many production techniques that give it an undisputed landscape uniqueness.

The grape variety used for the production of raisins, the Muscatel of Alexandria⁴¹, which is grown in the bigger productive area of Málaga (66%), is suitable for three purposes: the production of raisins, the production of wine and as table grapes to eat them fresh. This particularity shows the diverse nature of all the inputs that affect the production and that define the area. This triple approach helps the **economic sustainability** of the Málaga Raisin Production System in La Axarquía, as it enables to use those raisins that are not suitable for marketing, due to their size, to produce wine. This, therefore, establishes synergies and a specific symbiosis between both products: raisins and wine.



Fig. 16. Winery

According to the production process, the main types of wines under the Protected Designation of Origin “Málaga” are:

1. Liqueur wines: those in which wine alcohol is added. They can be dry or sweet.
2. Sweet wines produced without enrichment: those whose alcohol comes entirely from the fermentation of natural sugars. They can be wines from overripe grapes or from raisins.
3. Dry wines: those whose alcoholic strength is obtained only by natural fermentation.

The main types of wines produced with Muscatel grapes are:

- **Sweet liqueur wines:**
 - Natural sweet wine: Wine obtained from grapes must of the Muscatel⁴² variety, with a minimum initial natural sugar content of 212 grams per litre and a natural alcoholic strength greater than 7% vol. obtained from the fermentation of these musts. It is subjected to a process in which wine alcohol is added to musts in order to achieve the corresponding range of alcoholic strength.
 - Wine “maestro”: it is also produced from Muscatel grapes. It is a natural sweet wine obtained from a very incomplete fermentation because an 8% of wine alcohol is added to the grape must before fermentation starts. With this method, the fermentation is very slow and it stops when the alcoholic strength reaches 15-16% vol., leaving more than 100 g/l of sugar unfermented.
 - Wine “tierno”: wine obtained from grape juice from Muscatel grapes⁴³ which have been exposed to the sun for a long period. This results in a grape must with a sugar content exceeding 350 g/l, which, at best, is capable of spontaneously start a light fermentation. In any case, it can reach the optimum alcoholic strength for liqueur wines by adding wine alcohol.

⁴¹ Also known as Muscatel Gordo or Muscatel de Málaga. Specifications of the Protected Designation of Origin “Pasas de Málaga” (Málaga raisins).

⁴² It can be also produced with Pedro Ximénez grapes.

⁴³ It can be also produced with Pedro Ximénez grapes.

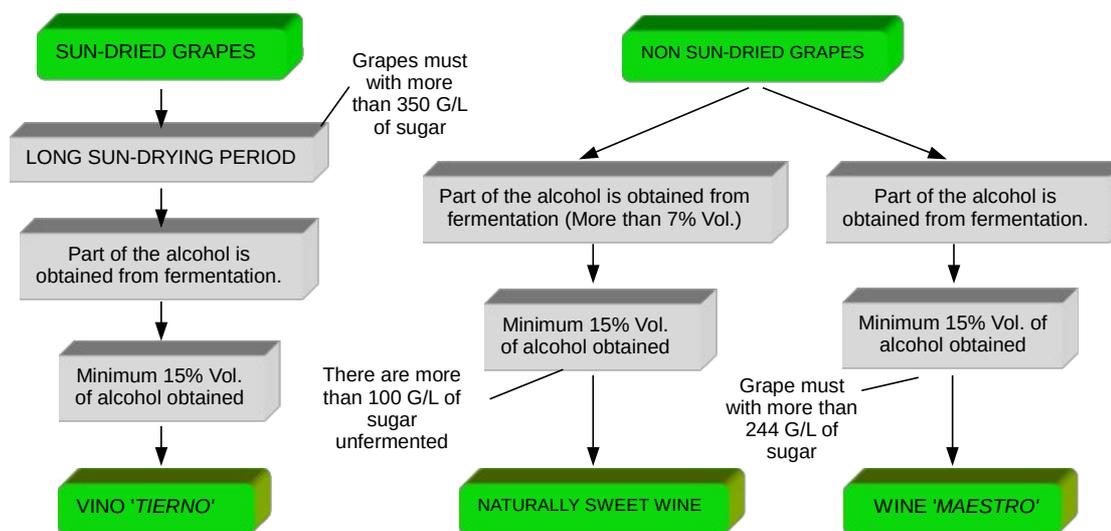


Fig. 17. Scheme for the elaboration of sweet wine liquor

- **Sweet wine produced without enrichment:**

- Naturally sweet wine: wine made from overripe or almost dried Muscatel grapes without enrichment and whose alcohol entirely comes from fermentation.

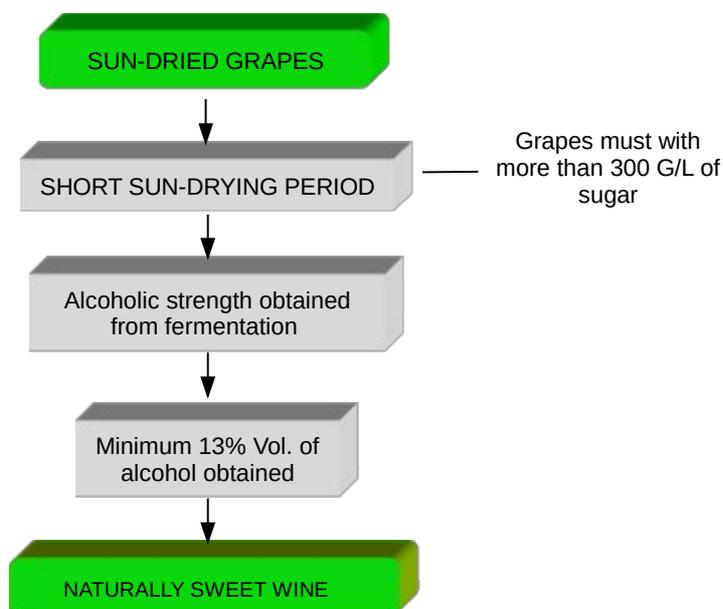


Fig. 18. Scheme of elaboration of naturally sweet wine

This productive symbiosis between grapes and wine has an impact on the typical landscape of vineyards and the traditional drying floors that are complemented with the 9 wineries⁴⁴ located in the raisins producing area. These wineries are located in Cómpeeta, Moclinejo, Sedella, Sayalonga, Colmenar and Vélez-Málaga. In addition, wine is matured or aged in wood vats called "boots" in an artisanal way by small producers for their own consumption.

⁴⁴ Number of wineries registered in the Protected Designations of Origin "Málaga" and "Sierras de Málaga". Data provided by the Regulating Board.



Fig. 19. Different types of wines made with raisins

2 Agro-biodiversity

The district of La Axarquía is a big area with more than 1,000 km², where there is a great biodiversity, as well as a wide range of agricultural crops. In this raisins producing area, this wide biodiversity is represented by the existence of different flora and fauna, by the use of domestic animals to transport grapes and by the coexistence of certain crops, along with the traditional grapes *Vitis Vinifera* variety, in the farms where raisins are produced.

a Ecosystem function

As Rafael Yus^{xxiv} explains, the features of the natural environment of La Axarquía have been determined by the existing physical substrate, the ecological dynamics of the flora and fauna that interrelates with it and by human settlements in the territory.

For centuries, most of the area has been subject to a high human pressure because farming land has increasingly occupied more territory so as to produce food for a growing population. Thus, natural vegetation has been reduced to those places where farming is almost impossible, while wildlife has interacted with the different humanized habitats.

The agricultural use of the territory has evolved along history to optimize the productive natural capacity of the environment. As a result, there are mainly Muscatel vines and drying floors on the phyllite ground of the area called Montes de Málaga and in the northern part of the Macizo de Vélez. Both areas are characterized by subhumid and seasonal rainfall, although from May to September there is a dry period. Rainfall is very rare and is concentrated in winter, a fact that gives the area an average rainfall between 375 and 450 mm, with torrential character, which produces soil erosion.

The soil is lithosol and immature due to erosion that prevents humidification. Its substrate is mainly made up of siliceous rocks and it has an average slope gradient exceeding 40% in more than half of the territory. The landscape is modelled with slopes, a fact that limits any possible agricultural alternative.

i Flora

In the areas where raisins are produced, there is a bioclimatic vegetation of holm and cork oaks with a thermo-Mediterranean ground, where there are some cork oaks combined with gall oaks and wild olive trees in the areas of greater latitude. This vegetation is characterized by

communities of thermophilous bushes, which are adapted to living in xeric conditions, forming a low thicket called *jaral de bolinas*, responsible of a very characteristic sheepback landscape that also includes various species of *Cistus ladanifer*, lavender, *Lavandula stoechas*, *Fumana ericoides*, *retama*, etc.

Trees and bushes made up the predominant vegetation of the uncultivated schist mountains of Montes de Málaga and Macizo de Vélez, where traditionally, rain-fed agriculture has been developed, with predominance of Muscatel grape growing for the production of raisins. This has a major environmental impact as it is located in an area especially vulnerable to erosion and desertification.

In fact, the abandonment of agricultural plots hardly allows the recovery of part of herbaceous vegetation and bushes, with just a little tree cover (locally called "**menchones**") in which there are species such as asparagus, hawthorns, dwarf palms, rue, common myrtle, kermes oak, spurge flax, ephedra, etc. The immaturity of the soil favours the erosion of the abandoned land, and bare soils suffer greater urban development pressures as they are used as rural land to take advantage of the value of the landscape.



Fig. 20. Vineyards landscape in winter. Plants and bushes native vegetation

24% of the species identified in the whole area corresponds to endemic species distributed throughout the various soil and climate areas of the district. At least 69 of these species have floristic interest due to their rarity and vulnerability^{xxiv} (see Annex 4 Species of floristic interest). Many of them are relegated to the areas of special natural interest of the district and most are endangered species.



Fig. 21. Carob trees in farmhouses

Carob trees (*Ceratonia Siliqua*) are an arboreal species that has traditionally played a significant role in the area. Its function was to shade workers who removed the grapes from the bunch at farmhouses. This is why there were usually carob trees in farmhouses as they were grown to have a greater shaded area.

ii Fauna

Vines are deciduous shrubs, with a huge root system, which lose their leaves in winter. From the biological point of view, they are the productive base of the ecological pyramid of a group of heterotrophic beings which made up the fauna associated with vineyards. Their richness in species will depend on the farming practices used, being highest when chemical treatments are reduced to the maximum, when slopes are protected with dry stone walls and when weed flora is left to grow at least outside the radius of the vine root system. In this way, according to inventories made⁴⁵, there is a rich variety of animals, both invertebrates and vertebrates, directly or indirectly associated to vines, what means that some feed directly on vines (herbivores or phytophagous) and others feed on those animals that feed on the vine (predators or carnivores), forming complex food webs that maintain a balance in their populations including potential pests that might affect vines.

Therefore, there are insects living in vineyards, that are potentially pests such as aphids (*Aphis gossypii*), which tend to be preferred prey of scale insects (*Cochinella septempunctata*) or moths (*Lobesia brotana*) which can be controlled by wasps (*Polistes gallicus*) insectivorous birds, such as common starlings (*Sturnus unicolor*) and common kestrels (*Falco tinninulus*), reptiles such as common chameleons (*Chamaeleo chamaeleon*) or large psammodromus (*Psammodromus jeanneae*).

The dry stone walls which form the containing walls of the terraces have many hollows where predatory insects such as spiders like the spider of the walls (*Zygiella x-notata*) or the opilion (*Pholcus phalangoides*) live. Moreover, there



Fig. 22. Nesting of European Serin (*Serinus Serinus*) in a vineyard

⁴⁵ Cabinet for Studies on the nature of La Axarquía

are also some reptiles that find shelter there and feed on arthropods, such as common geckos (*Tarentola mauritanica*) and snakes, such as Montpellier snakes (*Malpolon monspessulanus*).

But there are many more animals that roam in vineyards so, it is possible to find Algerian mice (*Mus spretus*), which attract foxes (*Vulpes vulpes*) although they are also attracted by grapes, as it happens to common genet (*Genetta genetta*).

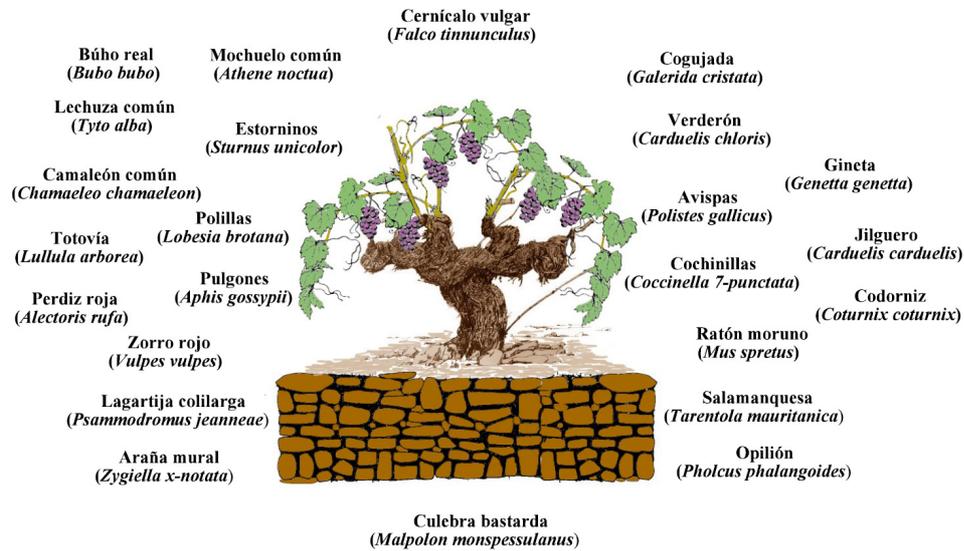


Fig. 24. Fauna living in vineyards in La Axarquía

Even so and as it happens in all ecosystems, the largest group of vertebrates is birds. In addition to those species already mentioned, there are species of true finches, such as greenfinches (*Carduelis chloris*) and goldfinches (*Carduelis carduelis*), larks, as woodlark (*Lullula arborea*) and crested larks (*Galerida cristata*), phasianidae of hunting interest, such as red-legged partridges (*Alectoris rufa*) and common quails (*Coturnix coturnix*), and nocturnal birds of prey, as Eurasian eagle-owls (*Bubo buho*), which nests among the vineyards little frequented by people; or barn owls (*Tyto alba*) if they can find shelter in ruins or nearby trees; or common little owls (*Athene noctua*), all of them predators of rodents and insects which they capture in the evening or at night.

The quality of the fauna living in vineyards, i.e. its biodiversity, will principally depend on their management. In this natural area, there is a surrounding biodiversity that comes from supplying ecosystems located in uncultivated areas (*menchones* – areas with little tree cover, riverbanks, protected areas, etc.), which provide a biodiversity connected to vineyards and which provide, especially harmful elements for cultivation, such as insect pests. This partnership between predators of the natural biodiversity and parasites and pests attacking vineyards, has resulted in a natural control of pests and an enrichment of biodiversity.



Fig. 23. Chameleon

It is especially noteworthy the existence of chameleons, species included in the Red Book of Endangered Vertebrates of Andalusia and considered as "species with a lower risk: nearly

threatened". It is the only saurian that inhabits Andalusia. They live in woody trees such as olive and almond trees or even vines, both in bushes and orchards. The most important group of this species is located in La Axarquía, specifically in the North-Western area of the district (Borge – Almáchar - Cútar and near Benamargosa) where there are high densities of chameleons associated mainly to vine growing as vines made up the predominant landscape^{xxv}.

Chameleons do not only use vineyards as habitat as they also use them as refuge in case of fire because vineyards in the summer - time when fires usually happen - are in their vegetative process and, therefore, they need more time to burn than bushes which are parched by the heat.

The destruction of the habitat and of the main places for their reproduction are the most important threats for this species.

b Use of domestic animals

The grapes harvest developed in La Axarquía is one of the European artisan grapes harvests, similar to those ones developed in the slopes of the Rhine in Germany or the Sil in Spain, where grapes are collected and transported with the help of boats. In the case of La Axarquía, the orography of the ground forces to collect grapes by hand and transport them, with the help of mules, to the lanes where small trailers can be used. Tractors are not used for the harvest.

The use of mules in the Andalusian agriculture was very common before the mechanization of this sector. Nowadays, although it has not still disappeared, its use is much less widespread and it is limited to very specific tasks or areas. Grapes harvest in this area contributes to the maintenance and conservation of this animal as there are more than 1,400 mules registered in the area⁴⁶.

Mules are animals resulting from a cross between a mare and a donkey. The result of said crossing is a sterile animal unable to reproduce, that is more robust than its parents, with a prodigious strength, with a greater lifespan, less demanding and with better resistance to the weather and the countless slopes of the area^{xxvi}.



Fig. 25. Mules used for harvest tasks. Pictures by Beatriz Moreno

Traditionally, mules have been used in arid areas because using other kind of animals such as horses or any other was impossible in small productions. This is because horses, during

⁴⁶ Data provided by the Livestock information and management system of Andalusia (2015)

breeding times, need an increase of feed and, other type of livestock can not carry out these tasks during pregnancy^{xxvi}.

Nowadays, keeping mules as essential animals for agricultural tasks means taking care of the reproduction of the species, as it was done long ago, having healthy animals and encouraging their breeding. For this, it is essential to continue those procedures of preparing the parents: a *burro hechor*⁴⁷ and a mare adequate to the type of mules desired.

These animals are fed with pruning remains or any other plant removed. This fact, together with the use of their excrement as fertilizers, contribute to the **environmental sustainability** of farming and constitute clear examples of circular economy in which the plant waste of crops is used.

The social impact of the use of this animal is also noteworthy. Not every farmer has a mule so, during harvest, farmers lend, exchange or buy/sell them, thus making an efficient use of this animal - what contributes to the **economic sustainability** of the Málaga Raisin Production System in La Axarquía. This activity also ensures that farmers' needs are met.

The different livestock fairs held in the area promote the preservation of mules. The most important fairs held in the area are listed below.

c Agricultural biodiversity

i Vine varieties

Until phylloxera⁴⁸ appeared in the 19th century, the varieties of vines planted in La Axarquía and Montes de Málaga were very different. Simon de Rojas Clemente (1807), in its Treaty on vines grown in Andalusia, cited 116 different varieties of vines^{xxvii}, of which 38 were considered as specific of this district of Málaga. Subsequent treaties and viticulture studies extend to 81 the vine varieties existing in the province of Málaga before phylloxera.

This varietal richness suffered a serious setback in 1878 when phylloxera invaded the fields of Málaga. Phylloxera arrived to Spain through Málaga. Specifically, the first farm invaded was "La Indiana", located in the municipality of Moclinejo^{xxviii}, a raisins producing municipality. Pellejero Martinez (1991)^{xxix} states that just six years after the confirmation of the presence of the insect, the pest had destroyed 28,552 hectares of vines. This meant the complete disappearance of the crop in fourteen municipalities of the province.

In the following years, phylloxera culminated in destroying the few vine stocks that had not still succumbed to its attacks. Between 1895 and 1900, it was difficult to find some living remains of the old vines⁴⁹ in Málaga.



Fig. 26. Muscatel vines. Picture by Beatriz Moreno.

⁴⁷A *burro hechor* is a stallion donkey used in the reproduction of mules with mares.

⁴⁸ Pest produced by the homoptera insect with the same name, related to the aphids of the Phylloxeridae family, that is a vine parasite from the United States.

With regards to means for insect fighting, the practices used were replanting European vines on phylloxera-resistant American vine rootstocks. Many problems arose until, finally, the large number of varieties and hybrids of American vine stocks was reduced to just those related to the species *Vitis Riparia*, *Vitis Rupestris* and *Vitis Berlandier*^{xxx}.

Málaga Raisin Production System in La Axarquía played an important role throughout the period of study of phylloxera as, in 1881, a Royal Order ordered the creation of three anti-phylloxera stations, one of them in Málaga. Equally, the Government decided that specimens of all the varieties existing in Spain had to be sent to Málaga so as to elucidate if any of them was resistant to the pest. Finally, it is known that some trials to produce Muscatel raisins were carried out by grafting this variety on *Vitis Riparia*, promoted by the Málaga Society for Physical and Natural Sciences.

Despite the difficulties arisen to start again with the production of grapes, La Axarquía showed a great **resilience** by replanting and returning to the vine monoculture. Therefore, the recovery of the grapes-growing area between 1897 and 1920 took place on the northernmost municipalities of La Axarquía and Montes de Málaga. This meant that the recovery of vine growing took place in those municipalities that, due to their economic structure based on smallholders, could not carry out a conversion to others crops such as olive trees because of their high planting costs and the greater number of years they need to produce fruits. Moreover, it is necessary to highlight the lack of soil appropriate for cereals.

Currently, the variety that predominates (66%⁵⁰ of the vine growing area of Málaga) is Muscatel of Alexandria, grafted on *Rupestris* of lot and Courderc 161-49^{xxxi} rootstocks which are both resistant to phylloxera. This variety has been used since the Muslim period for the production of wine, table grapes and raisins as it is highly appreciated for raisins due to its aroma, sweetness and skin texture. Nowadays, 84% of the Muscatel of Alexandria variety is used for the production of raisins.

ii Crops diversity

In La Axarquía, the level of association of Muscatel grapes growing with other crops is minimal. The reasons are found in the orography of the area, as there are plenty of hills and hillocks with large slopes ranging from 700 metres to the sea level; moreover, soils are mostly made up of decomposed slate and schists, they are poor regarding organic matter, nitrogen and phosphorus; and finally, they have a shallow green cover due to the erosion, what involves little retention of water.

Under these conditions, there are few crops that can coexist with vines. According to the crop declarations provided by the Regional Ministry of Agriculture, Fisheries and Rural Development of Andalusia in 2015, in those farms where grapes are grown for the production of raisins, the main crop cultivated is olive trees (representing 70% of the total vine-growing area), followed by almond trees (which only represent 8%). Olive trees coexists with vines, in certain cases, even in the same plot.

In an area poor in agricultural resources, farmers seek to complement the incomes obtained from raisins with other crops. According to the soil and climate conditions of the area, olive and almond trees are, a priori, the most appropriate crops for sloped areas and poor soils. As a result, olive groves yields in the area (1,700 kg/has for rainfed olive groves located on slopes greater than 15%) are much lower than the average of the province, 3,271 kg/ha, resulting in

⁴⁹ Data provided by the Spanish Ministry of Public Works and Transport. General Directorate for Agriculture, Industries and Trade (1911), cited by Pellejero Martínez, C (1991)⁴⁹

⁵⁰ Information provided by the Regulating Board of the Protected Designations of Origin "Málaga", "Sierras de Málaga" and "Pasas de Málaga".

low incomes. Moreover, as harvesting costs are higher than the average because of the low mechanization due to the topography of the area, the olive growing profitability is low and much lower than in other areas of the province.



Fig. 27. Agricultural diversity: vine and olive growing.

The conditions of the area also result in a high percentage of non-cultivable areas in raisins farms. Thus, in 2015 the surface non cultivated by any kind of crop⁵¹ represented 27% of the vine-growing area.

3 Local and Traditional Knowledge Systems

The farming techniques used in vine growing for the production of raisins in the area of La Axarquía are very similar to those techniques used in organic farming due to the impossibility of intensification and to the little profit margin of the crop.

In La Axarquía, there are several conditions that hinder farming practices and this is why it is necessary to develop the tasks by hand. In addition to the fact that slopes exceed the safety limits for mechanical tasks, the presence of lithosols and rock masses make these tasks even more difficult. On the other hand, smallholdings are scattered all over the territory so, using machinery becomes very difficult from the economic efficiency point of view.

This is a low-tech agriculture that keeps the same methodology used in ancient times with a low use of synthetic products that also uses farming techniques aimed at preserving the environment (low tillage, addition of organic matter), what means, tasks that require a lot of labour force.

In order to preserve this tradition and promote raisins, the creation of the Protected Designation of Origin “Pasas de Málaga” (Málaga raisins) and its Regulating Board⁵² was approved in 1996.

⁵¹Surface for permanent grassland, bushes and fallow land, according to the single payment declarations. 2015.

⁵²Order of November 6, 1996, which approves the Regulation of the Protected Designation of Origin “Pasas de Málaga” (Málaga raisins) and its Regulating board. Boja (Spanish acronym for the Andalusian Official Gazette) No. 135.

Its Specifications⁵³ include most of the traditional farming techniques used in the area, as well as those related to grapes drying and the removal of raisins, prohibiting any unnatural or artificial drying process.

a Growing techniques for high quality raisins

i Planting

In terms of the vine varieties grown in La Axarquía and Montes de Málaga, in the 19th century there was a wide range of them. Currently, the only variety recognised by the Regulating Board is the Muscatel of Alexandria⁵⁴. This variety has been used since the Muslim period for the production of wine, table grapes and raisins.

The holes to **plant** vines are made by hand, with a square section of just over half a metre each side, where a layer of topsoil is put at the bottom to place the rootstock⁵⁵ and the rest of soil forms a mound protruding about 15 centimetres. While planting is carried out, a task called in Spanish *romper la tierra* (break up the surface of the ground) is also developed. It consists of ploughing by hand to a depth of around 25 cm. Then, this task is followed by the fertilization of the bottom. To do this, a fertilizer consisting of manure usually from donkeys of the farm that are later used in harvesting, is used. Finally, rootstocks are cleft grafted in March.



Fig. 28. Farmer planting a rootstock. Picture by Beatriz Moreno

ii Main farming activities

Concerning **tilling**, in December and after vine training, farmers develop a task called *fragar las cepas*. This task consist of removing ungrafted vine stocks because grapes do not grow there as they are not grafted. After that, farmers shallowly till the surroundings of vines (task called *cava*) to enable them absorb rain water and prevent the formation of ditches that would break up the soil due to steep slopes and heavy rains. Later, farmers remove weeds from around the vine stocks and cover them with soil to protect them from the cold winter.



Fig. 29. Tilling. Composition from photos by Beatriz Moreno Laboreo.

At the end of the winter or early spring, a task called *bina* is developed. It is a task in which a more superficial dig than the one carried out in December is developed. It aims at removing the soil from the vine stock and shaping a base, thus removing weeds.

⁵³ Order of September 15, 2010, by which a favourable decision in relation to the registration in the Protected Designation of Origin "Pasas de Málaga" (Málaga raisins) in the corresponding community register, is issued.

⁵⁴ Also known as *Muscatel Gordo* or *Muscatel de Málaga*.

⁵⁵Mainly *Rupestris de lot* and *Courderc 161-49*⁵³

Pruning is carried out during dormancy, which occurs one month after the fall of leaves. Pruning is carried out a little bit late, at the beginning of December in order to avoid the poor fertilization to which Muscatel variety grafted onto Rupestris of Lot rootstocks sometimes tends. Vine shoots are cut with pruning scissors while the process of removing pruned branches is done by hand.

As farmers know that production is limited in the area, they do not abuse of **fertilization** since it implies an increase of costs that do not have a real impact on an increase of productivity. Manure is generally applied by hand every two years on the foot of vine stocks at the end of winter along with the task previously mentioned called *bina*.

Weed control is carried out also by hand and using low toxicity herbicides authorised for vine growing,



Fig. 30. Pruning. Picture by Beatriz Moreno.

applied with a backpack carried by the farmer on his back.

Although the characteristics of soils and climate of the area are not favourable to fungal infections, some **plant health treatments** are used in order to prevent the occurrence of powdery mildew. This fungus is fought using sulphur sprinkled by hand.

Finally, **tipping**, that consists of making a cut 2 or 3 cm above the bunch that is growing, is carried out thus resulting in a uniform canopy and favouring the growth of bunches. Experience has shown farmers that by using this technique, shoots stop growing and they are prevented from opening due to their weight and from being uncovered



Fig. 31. Different tools: hoe, scissors for pruning (above), axe and scissors for removing the grapes from the bunch (below)

because if so, they would be very affected by the summer heat. Moreover, it will favour new shoots to grow straight and they will better protect bunches.

The cultivation on slopes generates a serious drawback in an area of heavy rains and it also hinders all the tasks related to growing. Farmers have developed an acute wit in this sense. They have used natural water passages by refurbishing them in order to prevent water from



Fig. 32. Water flowing to the drains in a slope of the area.

Picture by Jesús Comino

destroying vines and building, using a hoe, a series of **diagonal drains** to collect all the upper waters and masterfully lead them to streams.



Fig. 33. Picture of a natural drain.

Recent scientific publications, such as the one by Jesús Rodrigo-Comino in *Journal of Mountain Science*^{xx}, conclude that those drains which are well designed and properly maintained, are a potential economic solution to protect the soil and the slopes of the vine-growing area of La Axarquía.

All the tasks described are carried out by hand, with the help of hoes, peaks or scissors, as they have been done for hundreds of years.

iii Grapes harvest

Harvest starts by mid-August. It is a harvest carried out by almost heroes who defy the heat and the slopes, overcoming the difficulties of the work with the help of mules. These animals not only carry the grapes from the field to the drying floors, but they also use the return trip to the vineyard to carry food and water to alleviate the thirst and hunger of the grapes harvesters in their daily work and also helping muleteers.

The typical way of harvesting bunches is using a pocket knife cutting the bunch leaving a peduncle (called in Spanish *marquilla*) which has not got any particular purpose but an aesthetic one. When farmers cut bunches, they classify them by quality, removing those grapes which are damaged or in poor condition (pecked by birds, damaged, etc.) To do this, they use small sharp scissors designed to this end.

Clusters are placed carefully in boxes (*aportaderas*) in such a way that peduncles are all up, with a certain angle and arranged in such a way that transport is easier. After that, they are put one by one in the traditional drying floors without damaging them.

Grapes are placed in boxes of 20 kg of capacity and are transported by mules. Harvesting is laborious due to grading tasks, because it is necessary to be careful when handling grapes and finally, due to the steep sloped terrain.

Traditionally, flat baskets (also called "*fruteros*" - fruit bowls), where grapes were carefully placed cone shaped with peduncles outward and upward, were used instead of boxes. Farmers carried them on their heads to bring grapes to the drying floors. This way of transporting grapes is only remembered in festive events held during the harvest.

During harvest, families move their residence from the village to the farm in order to carry out harvesting and processing (drying grapes and removing raisins from the bunch) in a continuous way. This change of residence has a significant social impact: on the one hand, at collective level as villages are less populated than the rest of the year and, on the second hand, at family level, because as



Fig. 34. Grapes harvest using boxes.
Picture by Beatriz Moreno.



Fig. 35. Bunches placed in baskets

children start classes in the first third of the month of September, families are forced to arrange to pick children up in different farms and take them to school by making routes in private cars or giving them a lift to the nearest school bus stop.

Without the participation of the whole family, the raisins produced in Málaga would probably not exist because if labour costs increased, the final product would not be profitable.

b Grapes drying and processing techniques



*Fig. 36. Mules helping to transport grapes.
Picture by Beatriz Moreno.*

Once grapes have been harvested, they are transported to the drying floors using mules, where they are processed under **drying techniques** that enable to dry grapes outdoors and under the rays of the Sun.

The grapes drying process is one of the oldest methods of food preservation that enables to keep and store seasonal products throughout the year.

Full bunches are carefully extended on the drying floors to ensure the greatest amount of sunshine and ventilation. Grapes are extended beginning from the lower to the upper part of the drying floor.

In order to dry grapes homogeneously, bunches must be rotated by hand throughout

the whole process. Drying depends on the size of the fruit so while smaller grapes are placed on the edges of the drying floors so as to remove them when they are dried and replaced with new grapes, bigger grapes are placed on the centre of the drying floor in order to better protect them from humidity thanks to the protection of awnings.



Fig. 37. Bunches put on the drying floors and farmer extending awnings to protect grapes. Pictures by Beatriz Moreno

Producing raisins takes approximately three weeks and it is usually carried out between September and October, depending on the weather conditions of the crop year and the degree of ripeness of grapes. Sun drying in drying floors is a completely natural procedure that is carried out by simple exposure to the Sun, without using any additives that may expedite the drying of grapes. It is significant that the average rate of transformation of the product is a kilo of raisins per 3 kilos of fresh grapes, a fact that shows the concentration of sugars that occurs in the product after drying.

During the dehydration process, water is removed by the interaction of three basic elements: air, temperature and humidity. Moreover, the characteristic schist soil of the area favours the elimination and non-accumulation of water (dew, moisture due to humid winds from the coast, possible rain,...) which, together with the low presence of organic matter in the stratum, leads to the absence of fungal diseases during the drying process

The time of exposure to the Sun to get the optimal drying depends on the weather conditions during the process therefore, the characteristic awnings of drying floors are used. Awnings allow to completely cover the grapes if the Sun is excessive or avoid dew and rain humidity.



Fig. 38. Raisins removed from the bunch. Picture by Beatriz Moreno

The quality of the raisins obtained is excellent as they are naturally sun dried without additives. The yeast present in the *pruina* (a epicuticular wax layer in the grape skin) is kept and it provides interesting probiotic properties. They reach a purplish tone similar to black, getting a characteristic taste and aroma.

The correct grading, selection, washing and conditioning of grapes is as important as the dehydration process.

Once grapes are dry, they are collected from the drying floors and they are removed from the bunches. This operation is done by hand in the farmhouses with small scissors suitable for this particular type of cut. When raisins are separated from the bunch, the pedicel is kept because if it is removed, raisins deteriorate, they become sweeter and sugars adhere to the skin and form a whitish crust, so they would lose quality, duration and price. At the same time that raisins are removed from the bunch, they are selected, graded and stored in wooden boxes. In some occasions, raisins are not removed from the bunch and they are marketed as a whole.

4 Cultures, Value Systems and Social Organisations

a Traditions and local bonds fostered by raisins

Rituals and traditions enable to transmit the knowledge to new generations. Concerning this crop that has been grown for centuries, almost all the agricultural tasks developed are associated with rituals and festivities of the Christian calendar.

Thus, the beginning of the work (and tasks performed), is related to the feast of the **Virgin Mary (December 8)** and continues until Easter. For the festivity of **St. Joseph (March 19)** vines begin to sprout and, according to the tradition inherited from ancestors, they can not be touched in the

following 2-3 weeks to avoid damaging them. The task of *bina* (a task developed to remove weeds) is usually finished by **Saint Isidore (15 May)**. Around the festivity of **Saint John (June 24)** those tasks performed to carefully prepare vines start (summer weeds are removed, ungrafted stocks are cut and bunches are covered with the leaves to prevent them from being burnt by Sun rays). By the festivity of **Saint James (July 25)** the preparation of the drying floors start (weeds removal, tillage to leave the floor flat, whitewashing, etc.) and, by the festivity of the **Virgin of August (August 15)** families begin their exodus from their houses to their farmhouses in order to start the most delicate tasks: grapes harvest, transport and placement in the drying floors. Still in the summer, the festivity of **Virgin of the Victory (September 8)** coincides with the first "*levantá*" (when raisins are picked up from the drying floors). During those dates, there is a tradition in which big bonfires are kindled at the farmhouses (sacred continuation of the burning of stubble that puts an end to the harvest of grapes), bonfires that have played throughout history the role of playful meeting point for families and neighbours. Dances, verses, songs, such as the *rueda* dance, *fandangos* and the *verdiales*⁵⁶ are played around the bonfires. These meetings lasted, at least, until the festivity of **All Saints Day (November 1)**, moment in which the crop year ends.

The ownership of farmhouses and drying floors, as well as the distribution of work, has a completely family nature and an extreme importance in the months of grapes harvest and drying. It is at this time when a full-time dedication is essential to make the most of a work developed throughout the year and when more labour force is needed to carry out the delicate tasks of harvesting, grapes placement in the drying floors and "*picao*" (removing the raisins from the bunches with special scissors).

The harvest is a family event in which even children used to participate in the past helping the adults of their families. Thus, until the last quarter of the 20th century, the schooling of farmers' children depended on the exodus of families to farmhouses; farmers' children began and ended at least one month later than in other areas of the province. Nowadays, the conditioning of the paths to the farmhouses allows the daily transport of children to schools, enabling them to attend to school according to the official school calendar. Families move to the farmhouses for harvest and they agree to shift to give a lift to children to school every day.

While grapes harvest involves everyone (men and women in the family), the task of removing the raisins from the bunch is considered as a purely female task due to the better ability of women to do it leaving the pedicel to ensure their durability. Without this short stem, sugars would adhere to the skin forming a whitish crust with the corresponding loss of quality and commercial value.

b Traditional culinary culture

The sun drying process consists of the natural drying of grapes under the Sun. This process reduces the water content of grapes, resulting in a high concentration of sugars in the fruit; a fact that facilitates and extends its shelf life (becoming like nuts) and enables its culinary use throughout the year.

The gastronomic tradition of the use of raisins in cuisine goes back in time throughout all the Mediterranean, as they are part of many traditional Al-Andalus dishes. As history passed by, the use of the sweetness of raisins to complete dishes has been exported to Latin American and Anglo-Saxon cuisines, in which raisins have been incorporated into meat and fish dishes, salads, rice, sauces, sweets and bread. However, their use in dishes has been reduced in the past years due to the emergence of seedless varieties which are more user-friendly. A

⁵⁶See section "Festive gatherings"

cooperation protocol has been recently signed in IEAMED⁵⁷ between Dimobe, UCOPAXA⁵⁸, the Asociación Moscatel and **Natividad Mercado Díaz**, recently awarded with the **MEDCHEF for the Best Mediterranean Cook, in order to showcase Muscatel products in cooking so as to mitigate the disappearance of Muscatel raisins from gastronomy**

The typical gastronomy of the area, almost of subsistence in most of the history documented, used the limited variety of foods available in the area to avoid gastronomic monotony. However, dishes were always traditionally accompanied of fresh Muscatel grapes, as if they were a loaf of bread, while raisins, the result of the farmers' effort, were dedicated mostly to commercialization and exports given their commercial value.

The culinary use of raisins was very limited in the producing area until a better standard of life was achieved and tourism begun as it favoured the emergence of new dishes which include Muscatel grapes as ingredient, similarly to other Mediterranean countries.

Raisins play an important role both in high cuisine and traditional dishes. They bring their flavour to sauces, thus counterbalancing the acidity of marinated dishes and they are used as ingredient of rice dishes, salads, breads and sweets, accompanying meat and fish. All the dishes including Málaga raisins, acquire a singular taste and aroma typical of the area of La Axarquía⁵⁹.



Fig. 39. Examples of gastronomy

Although the variety of gastronomic uses has been reduced in recent decades, the **gastronomic festivals** in La Axarquía have long roots and tradition. As time has gone by and some festivals that were once held in farmhouses during the harvest season have disappeared, new gastronomic events have emerged. The cultural identity of the population in relation with their rural environment, the sense of belonging to a territory and the desire to highlight and remember the traditional heritage, has encouraged to hold these festivals every year receiving a great amount of visitors.

Although these festivals are obviously entertaining, nowadays their main objective is to attract consumers to producing areas and show and give them the possibility to taste processed agricultural products. The main gastronomic



Fig. 40. Poster of the Raisins Day in El Borge

⁵⁷ European Institute of Mediterranean food (Spanish acronym IEAMED)

⁵⁸The Union of raisins cooperatives of La Axarquía (Spanish acronym, UCOPAXA)

⁵⁹Fernando Sánchez from the Association *La Carta Malacitana*. (Association that promotes traditional products, recipes and traditions that are part of the cultural and gastronomic heritage of Málaga)

festivals held in the area are explained below. Further information can be found in Annex 8 Other food festivals.

i Raisins day in El Borge

Among the gastronomic festivals held in La Axarquía, one of the most deeply rooted is the **Raisins Day in El Borge**, that is a continuation of the typically agricultural festivities that were held at farmhouses during the harvest, but with a more urban intentionality and product promotion.

This raisins festival was first celebrated at the end of last century in order to promote this product that has been traditionally grown in the area. It is held in the village with the greatest number of hectares dedicated to raisins production in Spain. The festival was considered as a **Festival of singular tourist interest** in Málaga in 2005, and it is held every year on the third Sunday of September.

ii Raisins festival in La Viñuela



Fig. 41. Poster of the raisins festival in La Viñuela.

At the end of the grapes harvest and drying process (at the end of September), the Raisins festival is celebrated in La Viñuela and it aims at promoting this product and the Muscatel wine of the area. This festival coincides with the moment in which the representation of the Patron Virgin of the municipality, the Virgin of Las Angustias, is moved from the Church of the village to a chapel. (In Spain, the tradition is to celebrate a kind of procession when Patron Saints are moved from one place to another)

This festival, which was created to commemorate the end of the harvest in the town, welcomes thousands of people to enjoy the Muscatel raisins produced in La Viñuela, homemade *chorizo* (a typical Spanish sausage) and *morcilla* (black pudding) paired with the sweet wine produced in the area.

This celebration, of great provincial interest, is organized and sponsored by the Local Council. It is completed with Christian religious ceremonies, music performances and traditional dances in honour of the patron virgin of the village.

iii Festival dedicated to vine-growers in Moclinejo

At the beginning of September (month characterised by vines and vine-growing workers), the region of La Axarquía is full of grapes and Moclinejo, with its traditional festival in honour of vine-growing workers, pays tribute to its roots and to those women and men working in grapes growing and in the production of the typical Muscatel wine of this village.

On the second Sunday of September, those who attend this festival of singular interest can go on a tour along the adorned streets of the municipality, that recreate typical scenarios of the wine-making tradition. In these scenarios, the tasks carried out in relation with wine and



Fig. 42. Poster of the festival dedicated to vine-growers .

raisins production such as treading, grading and removing raisins from the bunch, are represented.

In these festivales, the ancient sounds of *verdiales* (a primitive type of *fandango* from Málaga that can be danced) can be also heard. Music that, with its different styles, livens up the streets. Visitors should visit the Museum of Muscatel wine that takes visitors to ancient times thanks to objects that were used in the agricultural tasks developed in the cultivation of grapes and the production of wine centuries ago.

In addition, during the festival, there are tastings of typical products such as raisins, *gazpacho* (a cold vegetables soup), traditional *rosocos* (kind of doughnuts) and Muscatel wine in different places of the town, always accompanied by the music of local artists.

iv Festival of Muscatel grapes in Iznate



Fig. 43. Poster of the Festival of Muscatel grapes.

This festival, considered as Festival of Provincial Singular Tourist Interest, is held the first Saturday of August, before the families of the municipality move to the fields to start the grapes harvesting and drying process to produce raisins. Therefore, the festival of Muscatel grapes is also a feast of thanksgiving for the harvest of grapes and a farewell for all those families who move to the countryside.

What began as a mere tasting of typical dishes of the cuisine of Iznate has become a real gastronomic fair in which all the people of the village participate by placing stands in each street to taste the typical dishes of the area. The gastronomic route is enlivened by *Panda de Verdiales* (groups of musicians playing traditional music) of the province.

Each year, about 5,000 people attend this festival. They represent over 5 times the population of Iznate (920 inhabitants).

v Festival of the Ajoblanco in Almáchar

Every first Saturday of September, Almáchar celebrates its traditional festival of the *Ajoblanco*, a cold soup, of Arabic origin made with almonds and garlic served with other products such as wine and raisins. The festival has a great relevance for the municipality and, that day, it makes its streets become authentic outdoor museums with exhibitions of ancient tools of tillage, dowries and ceramics.



Fig. 44. Poster of the Festival of the Ajoblanco.

vi The Muscatel Market of Almáchar

The Muscatel Market was held in Almáchar in November of 2017 in order to promote the Muscatel raisins, enhance the gastronomic culture and pass on the traditions of the area. This market provides the visitor agricultural, livestock and industrial products produced in the area thus contributing to sustainability, social cohesion and the maintenance and creation of jobs. This event involves a wide range of cultural activities since the same place concentrates gastronomy, culture and folklore, with dances such as the *verdiales* and *la rueda*.



Fig. 45. The Muscatel Market of Almáchar

c Agricultural Fair

i Livestock fair in Almáchar

This fair is one of the few of these characteristics that are held in the area. This tradition, recovered more than one decade ago by the local council of Almáchar, has been consolidated at two levels: on the one hand, at social level as it has been included in the festivals calendar of the village and, on the other hand, at business level as it has become a meeting point for the agricultural-livestock sector of the province and also, it has been considered as an attractive event for residents and visitors.

A particular characteristic of this event is that, in parallel to the livestock fair, a training session given by a veterinarian to livestock producers on various topics of interest for them.

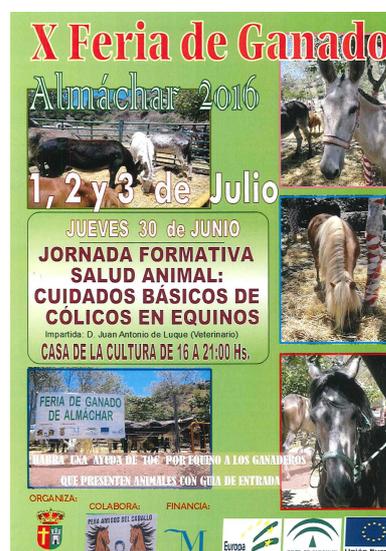


Fig. 46. Poster. Livestock Fair in the municipality of Almáchar

ii Mules fair in Arenas

In order to recover those agricultural tasks that were traditionally performed with the help of this animal, the municipality is decked out to hold mules and horseshoes exhibitions, load and thresh contests, to load and move mules and to show donkeys and horses every 12th of October.

Raisins, grapes, almonds and olive trees have one element in common: mules; the animal honoured in this event as it helps to maintain traditional crops.

The day ends with *Panda de verdiales*, popular dances and a tasting of breadcrumbs paired with the organic Muscatel wine produced in the area.

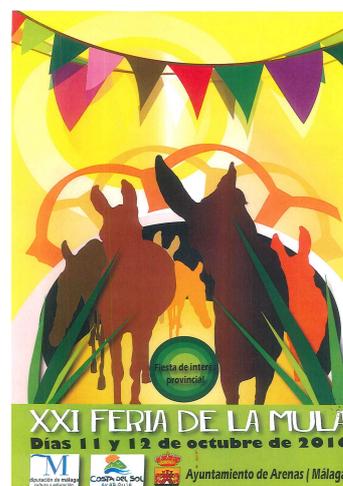


Fig. 47. Poster. Municipality of Arenas Mule Fair Cartel.

iii Real Feria de San Miguel and Veladilla del Carmen in Vélez-Málaga



Fig. 48. Poster. Fair of "San Miguel" in the Municipality of Vélez-Málaga Poster.

They are two important livestock fairs held in Vélez-Málaga, capital of La Axarquía which gathers people from all the different points of the area, the province and even of the whole Andalusia.

The first feast to be held is the one called "Veladilla del Carmen" which takes place for three days starting on July 16. The second feast, Real Feria de San Miguel, is the oldest and most famous.

Although the official origin of the Real Feria de San Miguel dates back to 1842 when it was created by a royal order that granted to Vélez-Málaga a livestock fair for late September and early October of each year, the true origin of the centuries-old tradition is much older. Since time immemorial, at the end of the summer, the friars of San Francisco of the Royal convent of Santiago celebrated a Jubilee where the most famous speakers of the time were summoned. As complement to these events, villagers

also organized secular festivals that received increasingly visitors from nearby villages. As visitors arrived in their own horses, was generating a series of commercial transactions spontaneously took place, thus gaining this fair a great importance and becoming the origin of this livestock fair.

d Festive gatherings

The main festivals that are related to the tasks developed for the production of raisins and the lifestyle at farmhouses include bonfires, the *zambomba* (a traditional instrument), *verdiales* and the *rueda* (the wheel, name of a traditional dance). Nowadays, most of them have lost their original purpose but continue to be held in key events, such as fairs, to avoid losing traditional activities.

i Bonfires

In the Bonfires night (on September 7, 8 and 9) people stopped working to make bonfires, although in this period there were many things to do. They cheered the Virgen de la Victoria (Virgin of the Victory) and they danced a dance called la rueda (wheel) until dawn.

This festival of bonfires in honour of the Virgen de la Victoria exists in the villages of La Axarquía since the elderly people in the villages can remember. It is a cultural manifestation that has been passed down from one generation to the next.

The essential element of this festival is its collective nature: it gathers people around the bonfire, whether they are children, elderly or young people, all neighbours of the same place, relatives or simply people who live on nearby farmhouses. The festival begins with the gathering of firewood; a task in which all residents are involved. When the bonfire is finished and after performing a magical rite consisting of jumping it, other elements appear: singing and dancing. In most of the meetings, people danced a local dance called *rueda* until dawn. Sometimes, the *verdiales* enlivened the evening and, in many places, these festivals shifted.

ii The zambomba

This festival, recognised in the Atlas of Intangible Heritage of Andalusia^{viii}, took place in the countryside and hardly ever in the village. It was a celebration of rural life. In this context of slow and parsimonious life in rural areas, long and repetitive poems were sung. The songs were sung by everyone sitting in a circle. Formerly, women usually played the *zambomba* and girls had the initiative to play and also to convene the meeting.

iii The verdiales

The '*verdiales*' are a primitive type of *fandango* from Málaga that can be danced. It is music in triple metre and it dates back to even before *flamenco* emerged. It has a peculiar accompaniment: two guitars, a violin, a tambourine and two pairs of cymbals and all together receive the name of "*panda*" (a bunch of people).

The *cantaor* (singer), located in the middle of this rustic *rondalla* (group of string instruments), is the main element of the music, where violins set the melodic structure, while the pace is set by the tambourine.

The performances of *Pandas of Verdiales* are typical in the day of the grape must and dried meat of Colmenar, or in the festival of Muscatel grapes of Iznate.

iv The rueda

During the forties and until the sixties, the *rueda* was the way young and older people had fun in most of the villages of La Axarquía and even outside de area. At this time, in this place there wasn't another type of dance. The *rueda* has a collective dimension: all the group of a rural community of a neighbourhood are invited. This event is participatory as everyone is part of a circle, caught hands. All sing and dance.

This feast is no longer held and in order to promote it and avoid it falling into oblivion, some associations offer workshops the *rueda*. In the past two years, they have been organised in Almáchar, and they have been well received by mainly elderly and young people. In these workshops, almost forgotten songs and various forms of dance have been recovered.

e **Artistic and cultural representations**

i Lexicon

Conversations amply reveal the richness of a wine tradition still present in the area: techniques, tools, features of the terrain, etc. Although they are not original, at least they show and expose how selection words and phrases around tools, products and tasks^{xxxii} have been selected, compiled and interpreted.

Language is linked to human kind and its environment and this is why the vocabulary of the vine growing area of La Axarquía is characterised by being related to the land and tasks. Although the technological revolution has made many agricultural tasks disappear and has sank many tools that were essential into oblivion, in La Axarquía, the evolution has been different. Therefore, traditional nature of grapes growing has helped to keep the majority of the words used to designate tools, as well as those verbs used to carry out the tasks. Some of the terms related to land property that still remain are:

Rain-fed	Irrigated
Suerte	Huerto
Tireta	Huerta
Mojón	Liño
Lomo	Tabla
Monte	Corredera
Manchón	Armáciga
Majuelo	

Table 3 Some words that are still used.

The words used in the area to designate elements, tasks, tools and others, show differences when compared with the ones used in other territories. Thus, Josefa Gamez³⁶, in her book dedicated to the village of Almáchar, identified the lexicon differences with regard to other vine-growing territories shown in Annex 5 Lexicon.

ii Literature

There are multiple literary references of the area related to vine growing. The famous poet of La Axarquía, Salvador Rueda Santos, native of Benaque (Macharaviaya), wrote on numerous occasions to the process of the transformation of grapes into raisins and to the festivals that they involve.

Equally, Arturo Reyes, writer from Málaga, perfectly described some of the tasks developed in a farmhouse in his novel "El Lagar de la Viñuela". See Annex 6 Examples of literary texts

iii Art: museums and lithography

Vine growing continuously appears in the artistic representations of the area. There are multiple works of artists who aim to immortalize moments of everyday life, situations, facilities, etc. related to the cultivation and preparation of raisins.



Fig. 49. Paintings by different authors. From left to right, La pasa, El pasero and the mural Mi tierra, mis raíces.

As an example, paintings such as La pasa (Raisins) of Manuel Blasco, El pasero (The raisins farmer) of Amparo González or Puestas de sol (Sunsets) of Dionisio Pérez can be mentioned. Moreover, there are paintings and murals painted by Evaristo Guerra and murals painted by Inmaculada Fernández such as Mi tierra, mis raíces (My homeland, my roots).



Fig. 50. *Drying floor. Oil painting on linen. Author: Evaristo Guerra Zamora*



Fig. 51. *Monument of the grape harvester. Municipality of El Borge*

As far as sculptures are concerned, the Monument of the grape harvester (the sculpture of the grapes harvester) located in El Borge, work by Aurelio Fernández, can be highlighted.

The Raisins Museum of Almáchar is also relevant as it takes visitors to a tour showing the entire raisins production and processing processes. On October of 2017, the project for the new museum and information centre for the raisins produced in La Axarquía to be located in Almáchar has been publicly presented (<http://www.diariosur.es/axarquia/almachar-contar-museo-20171005132847-nt.html>). This ethnographic museum will serve to showcase vines as a crop that has defined the geographical and landscape personality of La Axarquía, as well as to preserve the history of Málaga Raisin Production System and to disseminate the harvesting techniques, the sun-drying process developed in the traditional drying floors, the removal from the bunch and the subsequent selection.



Fig. 52. Raisins Museum in Almáchar. Picture by Carmen Ocaña



Fig. 53. Presentation of the project for the Museum and information centre for the raisins produced in La Axarquía

Moreover, in Málaga there is a Wine Museum, where visitors can admire a splendid collection of tags and labels related to wine and raisins. In Riogordo, there is an Ethnographic Museum, with a section devoted to the production of wine from raisins. Moreover, Moclinejo has a Winery Museum and El Borge has a Museum called “Posada del Bandolero” (Bandit’s Inn) that shows tools and utensils used in the production of wine and raisins.

Taking into account the different types of packaging and "wrapping papers" traditionally used to market raisins would be interesting as they allow to identify their different destinations. While the raisins for the internal market were just wrapped in brown paper with the brand or a simple image, those containers for exports used higher quality papers decorated with meticulous quaint images full of colour. Many of these labels have been precious collectors' items.

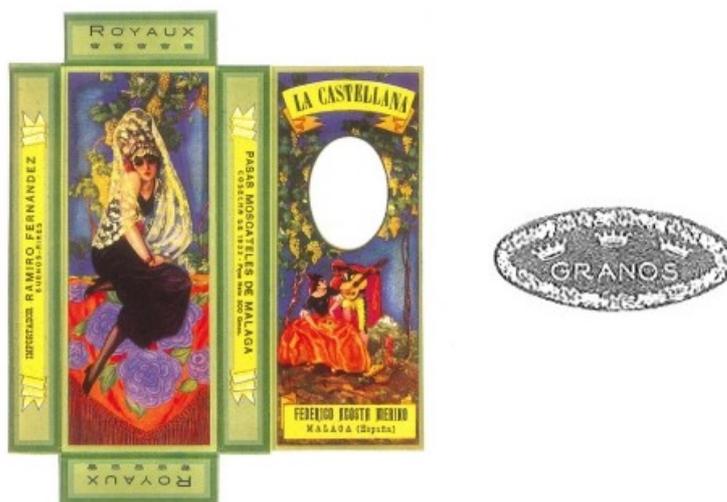


Fig. 54. Tags, labels and stamps to market raisins.

Currently and until January 28, 2017, an exhibition under the title "Málaga raisins and decorative arts" is exposed in the Municipal Heritage Museum of Málaga.



Fig. 55. Exhibition "Málaga raisins and decorative arts". Museum MUPAM

This exhibition provides an unusual and spectacular view of the creative universe that surrounded the packing and export of raisins to the farthest places of the world during the 19th century and the first third of the 20th century. It should be noted that Málaga packers and exporters of this product did not skimp economic means and opted for design to offer the consumers of this product - living in places as distant and diverse as New York, Boston, London, Paris, Petesburgo, Stockholm, Berlin, Buenos Aires or Hamburg - not only the best raisins in the world but also a decoration in their wrappers and boxes which, then and today, are authentic masterpieces of the decorative arts.

As indicated in the exhibition brochure, *"with this exhibition, the city of Málaga joins this interesting initiative promoted by the Raisins Board, the municipalities of La Axarquía, the*

Regulating Board of the Protected Designation of Origin and regional public administration so as to declare the cultivation of Muscatel grapes and raisins production process as a GIAHS by FAO."

f Role played by social organizations

The associative organization of the area of La Axarquía is rich in terms of number of associations and their links with the various activities that are carried out there. All associations, in their scope, are culturally identified with the territory in which they develop their work: La Axarquía. All together form a multidisciplinary performance group (dedicated to agriculture, rural development, tourism, etc.) which play a substantial role in the achievement of the objectives proposed in the dynamic action plan of Málaga Raisin Production System in La Axarquía, each one in its area of action.

i Association Muscatel

The Association Muscatel is a non-profit association that aims to disseminate everything related to the Málaga Raisin Production System in La Axarquía, the main producing area. The main purpose of this association is to take advantage of the many attractions derived from the most important economy of the town, the cultivation of Muscatel grapes, thus promoting the current accommodation and restaurants infrastructures already existing by developing and promoting them and creating new attractions through the defence of Muscatel grapes and other untapped or newly created resources.

In order to achieve these goals, an Ethnographic Complex is expected to be created. It will be used to transmit the knowledge about Muscatel grapes growing and the production of raisins and wine from Málaga, from the earliest times to the present day, to future generations and visitors.

Moreover, the Association Muscatel is the catalyst of the proposal for the designation of Málaga raisins production as a GIAHS by participating in the Working Group for the preparation of this proposal.

ii Second level cooperative UCOPAXA

The Union of raisins cooperatives of La Axarquía (Spanish acronym, UCOPAXA) was established as a second level cooperative in 1980. It comprises eight cooperatives that gather 700 farmers who produce Muscatel grapes in the area of La Axarquía. UCOPAXA is dedicated to the grading, packaging and marketing of raisins produced by its members, what represents, approximately 50% of the total raisins production of Málaga. Moreover, since 1996, UCOPAXA produces and sells a limited production of natural sweet wine and sweet wine.

UCOPAXA plays the role of backbone of the raisins producing sector, mainly of small producers. In addition, it plays an active social role in everything related to the raisins sector as it is shown by its participation in the Working Group for the preparation of this GIAHS proposal or by its participation in medical studies related to the consumption of raisins.

iii CEDER of La Axarquía

The Association CEDER "*Centro de Desarrollo Rural de la Axarquía*" (Rural development centre of La Axarquía - CEDER-Axarquía) was created in Benamocarra in 1992 under the formula of non-profit association and it was promoted by the economic and social stakeholders of the area. Currently, it is made up of 76 partners: 32 public entities, 42 private entities and 2 public law corporations.

Some of its objectives are: achieving a balance between development and conservation of the physical environment, as well as recovering landscapes of tourist and environmental interest. The association has established the specific objective 3.6 "Knowledge promotion and awareness-raising of population concerning our natural and heritage resources", in the "Local Participatory Development Strategy of the area of La Axarquía" for the period 2014-2020.

iv APTA (Asociación para la promoción turística de la Axarquía)

APTA "*Asociación Para la Promoción Turística de la Axarquía*" (Association for Tourism Promotion in La Axarquía) comprises the 31 municipalities of the area of La Axarquía and it aims at highlighting the tourist value of the area of La Axarquía. One of its contributions to the raisins industry is the Tourism guide on the Route of the Raisins, which aims to show visitors the charm of the villages located in a natural environment of outstanding beauty that have preserved their traditions.

v CEPA Moclinejo (Centro de Estudios de la Pasa Moscatel de la Axarquía)

CEPA Moclinejo "*Centro de Estudios de la Pasa Moscatel de la Axarquía*" (Centre for the Study of Muscatel raisins of La Axarquía) is a newly created organisation which aims at supporting the management of the GIAHS. It is a social initiative whose origin was the knowledge existing in the area regarding the tasks developed for the GIAHS proposal. This social group will play an important role in the implementation and management of the GIAHS.

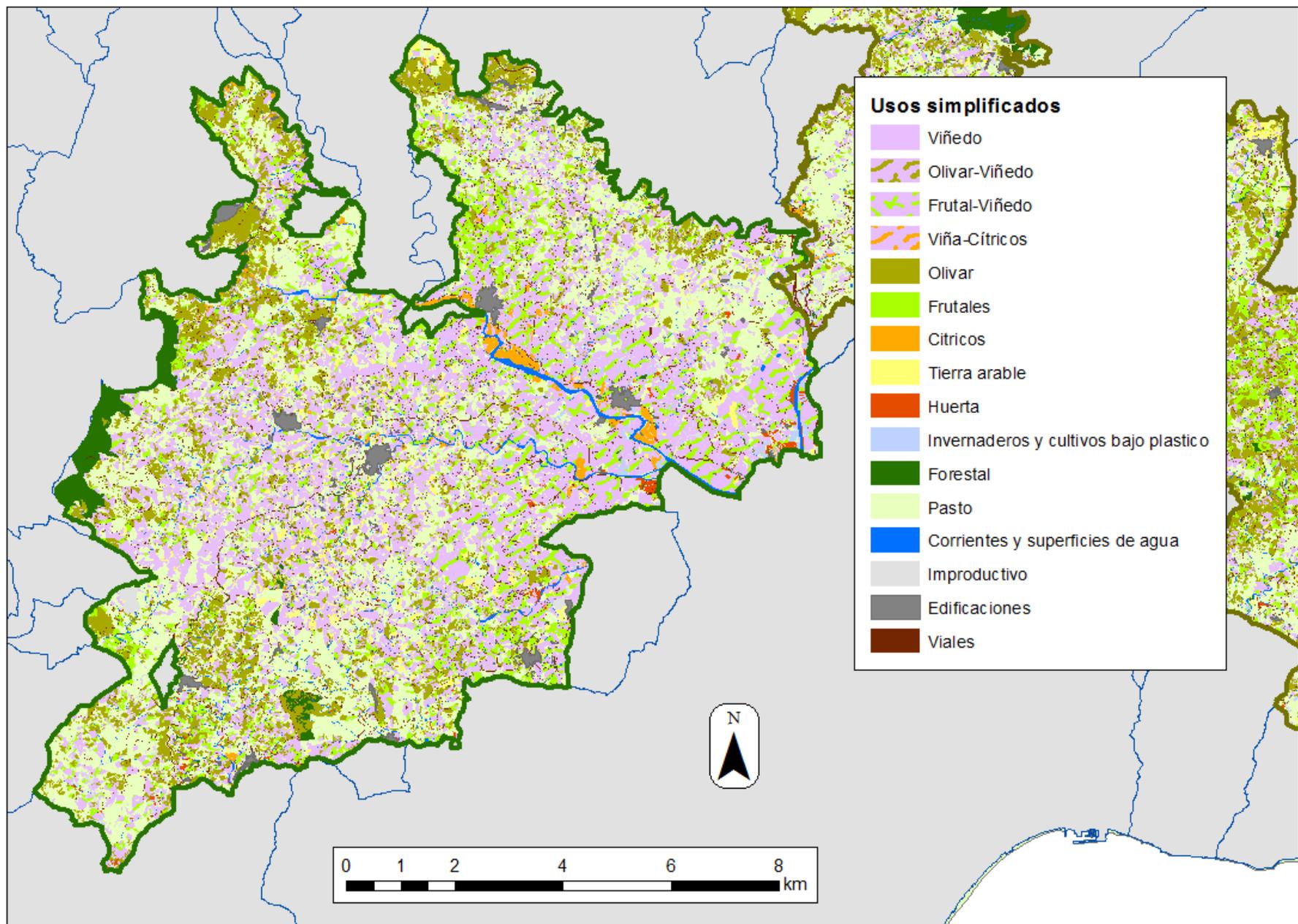
5 Landscapes and Seascapes Features

a Description of the landscape

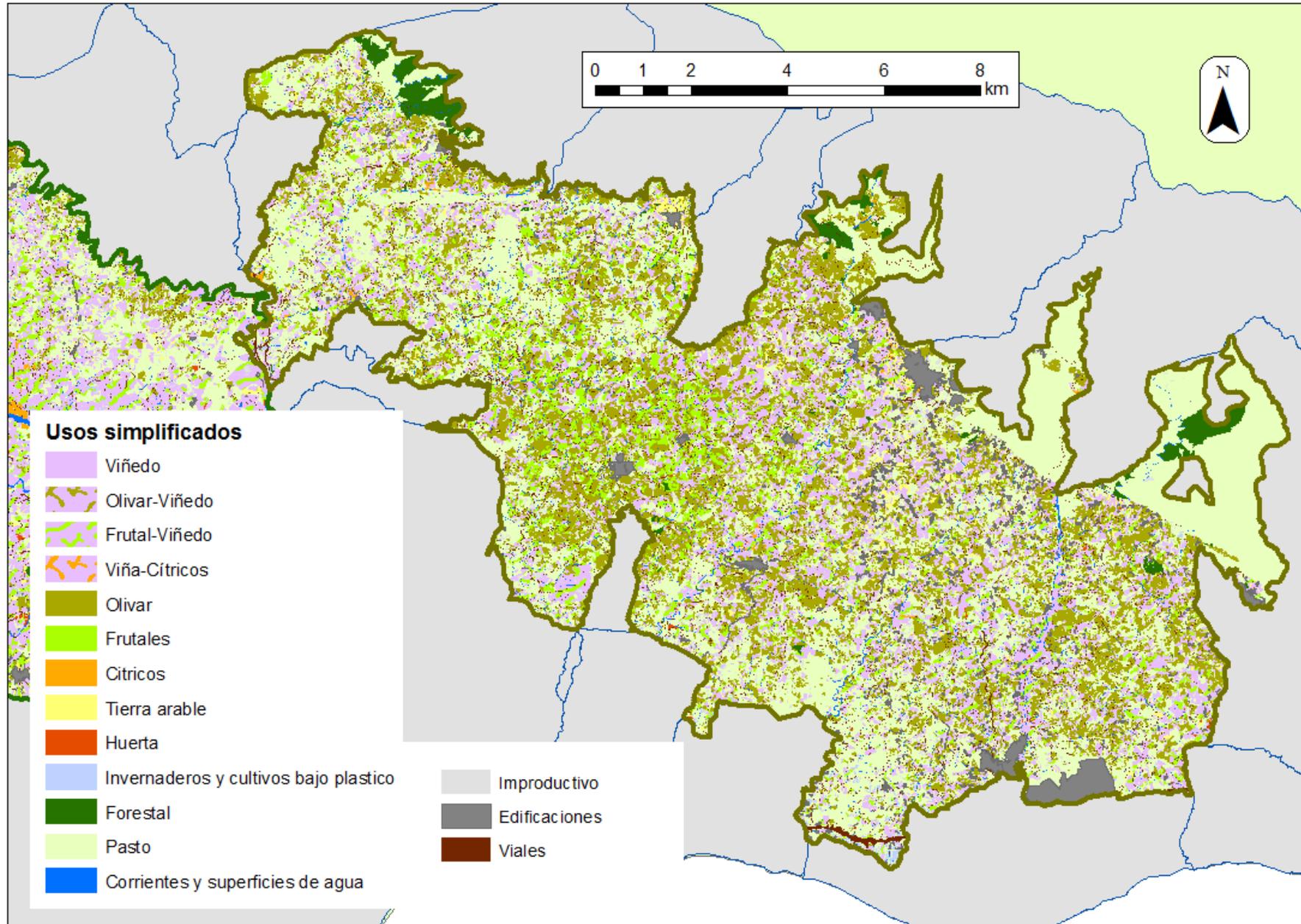
The European Landscape Convention defines landscape as "any part of the territory, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors" (Council of Europe, 2000). It is a concept that describes a dynamic process that results from a human action on the territory, which relates the intrinsic characteristics of the place with the cultural actions developed by the local community. A landscape is, therefore, a global concept that describes a cultural reality; it is also a management tool and an important socio-economic resource that can contribute to the improvement of the life of a local community^{xxxiii}.

So, the landscape^{xxiv} is not only a natural space but something more complex: **it is the overall result, at territorial level, of the interaction between human kind and the environment during long periods of time.** The assessment of the landscape is subject to subjective components and, therefore, it varies according to cultures and historical moments. Landscape is a resource and a cultural heritage of human kind and its history, which is usually more appreciated by tourists than by residents. This can be especially seen in the Agricultural Landscapes, which have been totally undervalued until very recently as they were considered as "working landscapes" as the cultural value they have was not appreciated. However, hopefully nowadays, they are being appreciated as heritage areas^{xxxiii}.

In general terms, the landscape of La Axarquía corresponds to a mountain range of middle mountains, where there are rain-fed woody crops combined with farmland, grassland and natural bushes (see Map 1. and Map 2.). The presence of a mosaic of low intensification crops, abundant semi-natural vegetation and structural elements scattered all over the area (mainly traditional drying floors and farmhouses), show a high landscape diversity.



Map 1. Map of the land uses of the subarea Low Axarquía



Map 2. Map of land uses of the subarea Eastern Axarquía

The relief not only determines the landscape but it also determines the visibility it may have. The area of La Axarquía, and more specifically its landscape made up of vineyards, remains hidden from the coastline area and the main motorway of the area. It is a landscape which can not be seen from the outside as it is surrounded by mountains and limited by the sea to the South. The only way of seeing this fantastic landscape is by accessing it via the existing communication routes. Sierra Tejeda and Sierra Almijara⁶⁰ are the permanent backdrop of this area. They are characterised by steep and abrupt calcareo-dolomitic materials that prevent the area from the cold of the North and favour a mild climate. Therefore, the sea offers the necessary moisture to supplement the lack of rainfall thanks to its constant breezes, thus contributing to growing on rugged slate soil.

All this generate a scenic capital marked with milestones and division throughout the entire area. As far as the GIAHS area is concerned, the unique structural elements of this agricultural landscape are the drying floors which are the simplest but optimized collectors of solar energy, that allow to turn this fruit into non-perishable food. These drying floors are all scattered through the mosaic of crops grown in the sunnier slopes.

Two planimetric divisions have been made from one of the parts with greater visibility of the drying floors according to the land uses. Both divisions allow to observe the complexity in the land use and the relationship with the relief. Its schematic visualization facilitates the its understanding.

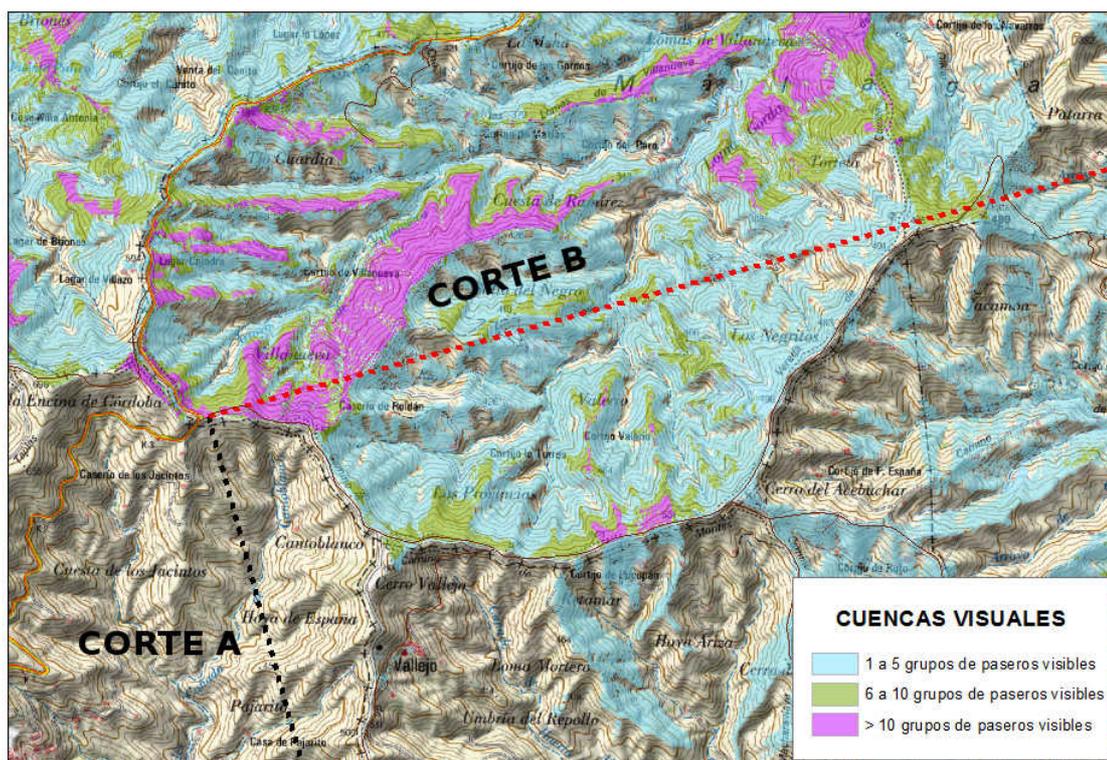


Fig. 56. Details of the starting point to make the planimetric divisions

⁶⁰ The name Almijar comes from the Arabic *al-mixar*, which means drier. The Sierra (mountain range) then takes its name from the numerous drying floors that can be found in its part of La Axarquía to sun-dry grapes.

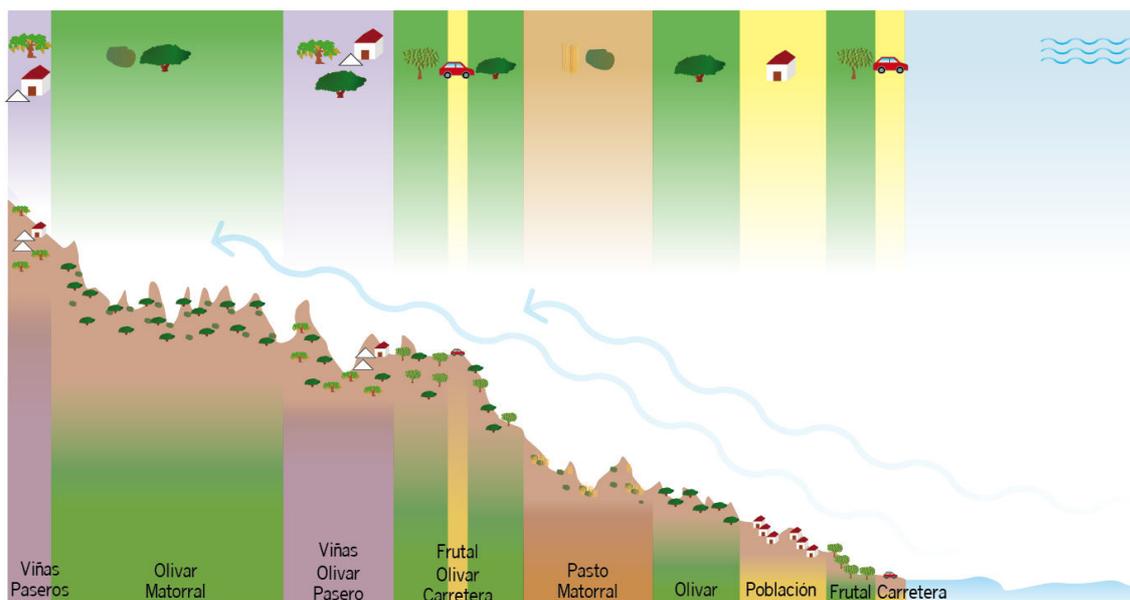


Fig. 57. Simplified representation of land uses in planimetric division A

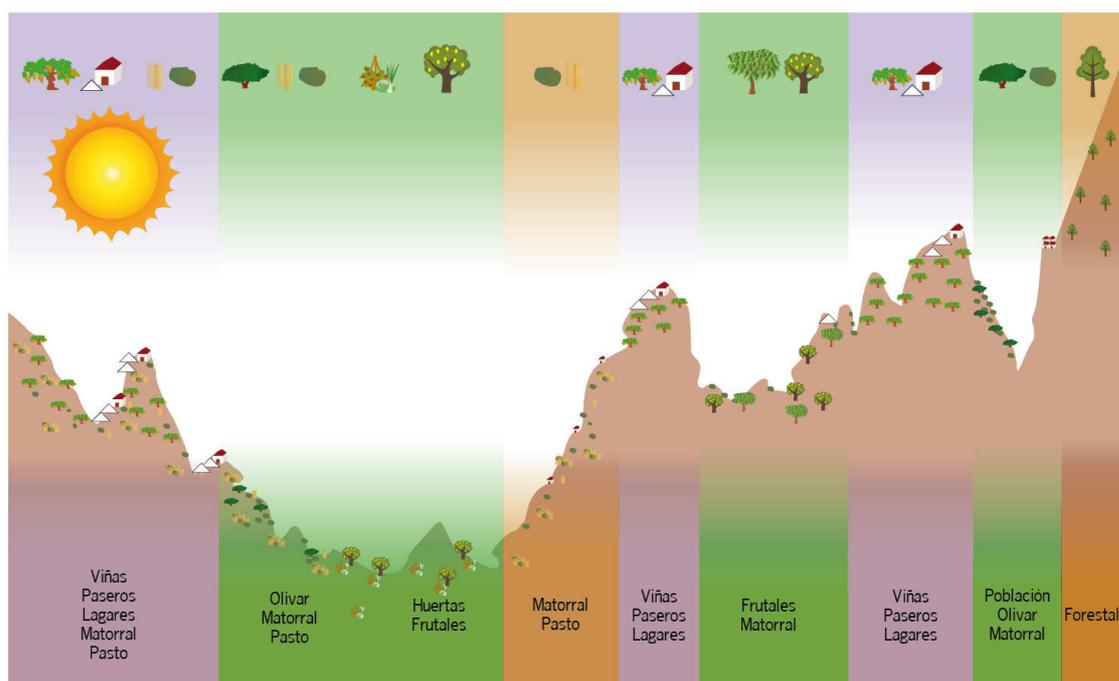


Fig. 58. Simplified representation of land uses in planimetric division B

To measure this heterogeneity in our scope, different indices have been used at SIGPAC⁶¹ plots level, as they demonstrate the diversity before mentioned in the area comprised by the GIAHS area (See Annex 2)

⁶¹SIGPAC: Spanish acronym for the Geographical Information System for Agricultural Plots. This system enables to geographically identify the plots declared by farmers and livestock producers, under any aid scheme related to the area cultivated or used for livestock. The system consists of a mosaic of digital orthophotos overlapped by the plans of rustic cadastre.

- **Average size of the patch:** it is the average of the area of the patches that make up the landscape. A patch is the set of SIGPAC plots which are physically together with the same land use. Therefore, the lower the average size of patches, the greater the diversity of the land use and, therefore, it shows a greater heterogeneity.

As you can see, 90% of the area is classified in the three levels with the greater heterogeneity.

Average Size Patch	Village (No.)	cadastral area (No.)	Area (ha)	
0,15-0,30	17	51	11.899	42,4%
0,31-0,40	14	35	8.174	29,2%
0,41-0,55	11	16	5.267	18,8%
0,56-0,75	4	4	963	3,4%
0,76-1,87	3	3	1.736	6,2%
Whole scope		109	28.039	

Table 4 Classification of the area according to the ASP index (see Map 4.)

- **Density of the margins:** this index measures the fragmentation of the patches that make up the landscape so, the greater the value, the greater the number of plots. It is calculated by measuring the length of the perimeter of the patches divided by the total area of the cadastral area.

More than 88% of the territory is classified in the three upper levels.

Density of Margins	Village (No.)	cadastral area (No.)	Area (ha)	
0,81-0,83	1	1	1.015	3,6%
0,84-0,85	5	6	2.189	7,8%
0,86-0,87	15	36	8.922	31,8%
0,88-0,89	18	54	13.482	48,1%
0,90-0,91	6	12	2.431	8,7%
Whole scope		109	28.039	

Table 5 Classification of the area according to the DM index (see Map 5.)

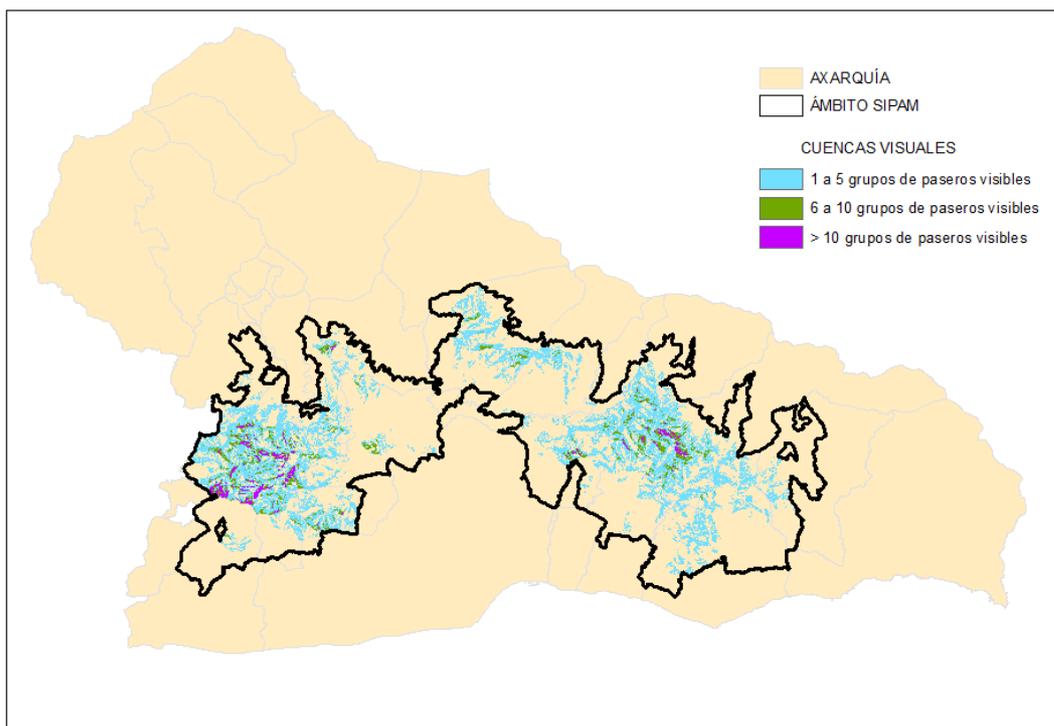
- **Simpson's diversity index:** index that measures the richness of the landscape land uses. The index has a value 0 when the landscape only has a single use and it reaches 1 when the number of patches of different uses increases, without existing a dominant use.

The fact that our area has values greater than 0.80 shows the great diversity of uses of the landscape.

Simpson's Diversity Index	Village (No.)	cadastral area (No.)	Area (ha)	
0,81-0,83	1	1	199	0,7%
0,84-0,85	4	5	1.661	5,9%
0,86-0,87	11	32	7.856	28,0%
0,88-0,89	18	53	14.261	50,9%
0,90-0,91	13	18	4.062	14,5%
Whole scope		109	28.039	

Table 6 Classification according to the SD index (see Map 6.)

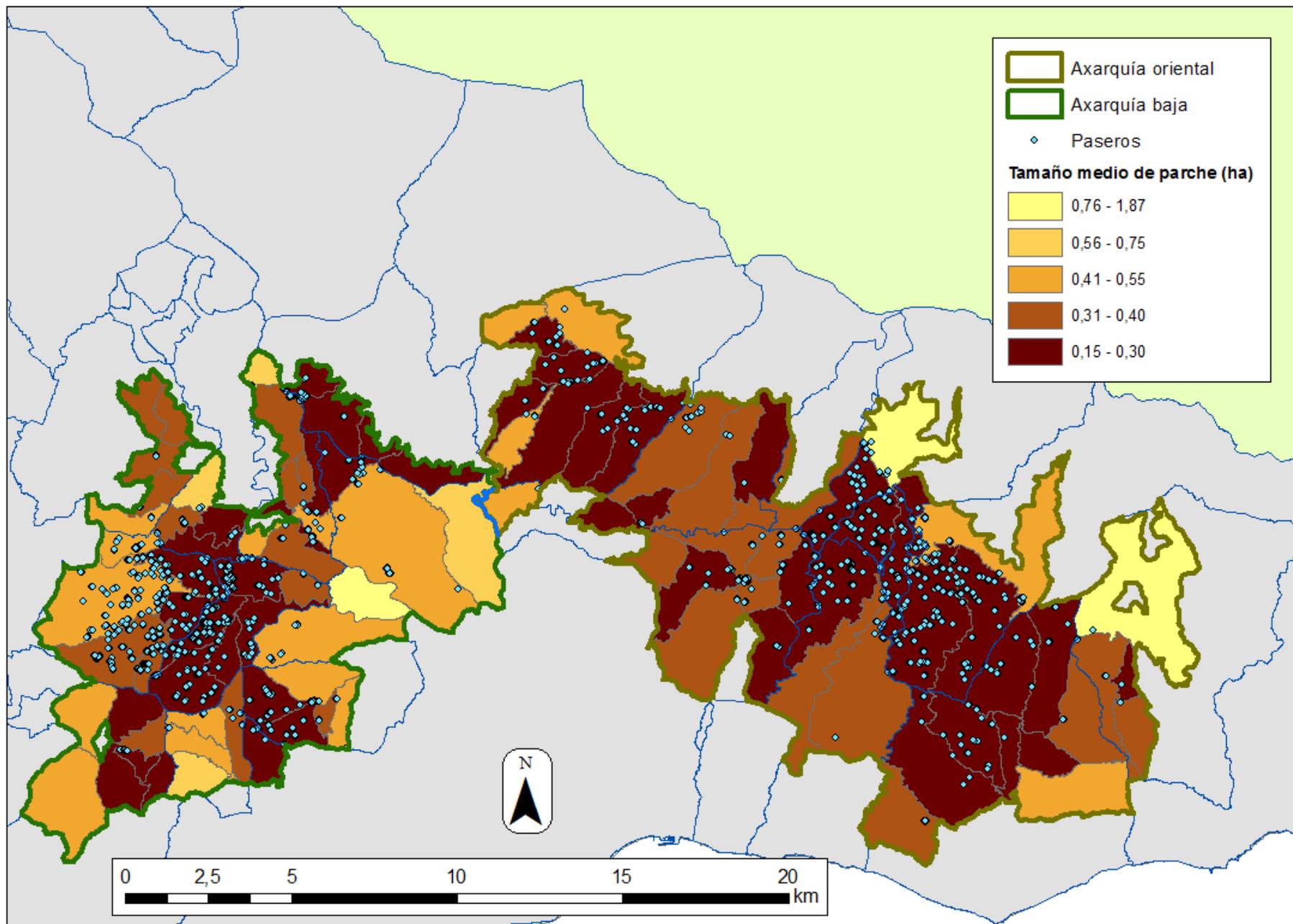
To understand the beauty and complexity of the cultural landscape of raisins, it is essential to study the visibility of the structures that characterise it and make it unique, the drying floors. To do so, the visual basins of GIAHS area have been graphically studied using a surface model derived from LIDAR⁶², assuming that the drying floor is 1 m tall, the observer 1.6 meters tall and that the drying floor can be seen at a distance of 1 km. Based on these assumptions, some maps where it is possible to identify from which part of the territory drying floors can be seen, have been obtained. In these maps, the different groups⁶³ that can be seen have been identified. Map 3. Shows the visual basins of the whole area while Map 7. and Map 8. shows the subareas in detail.



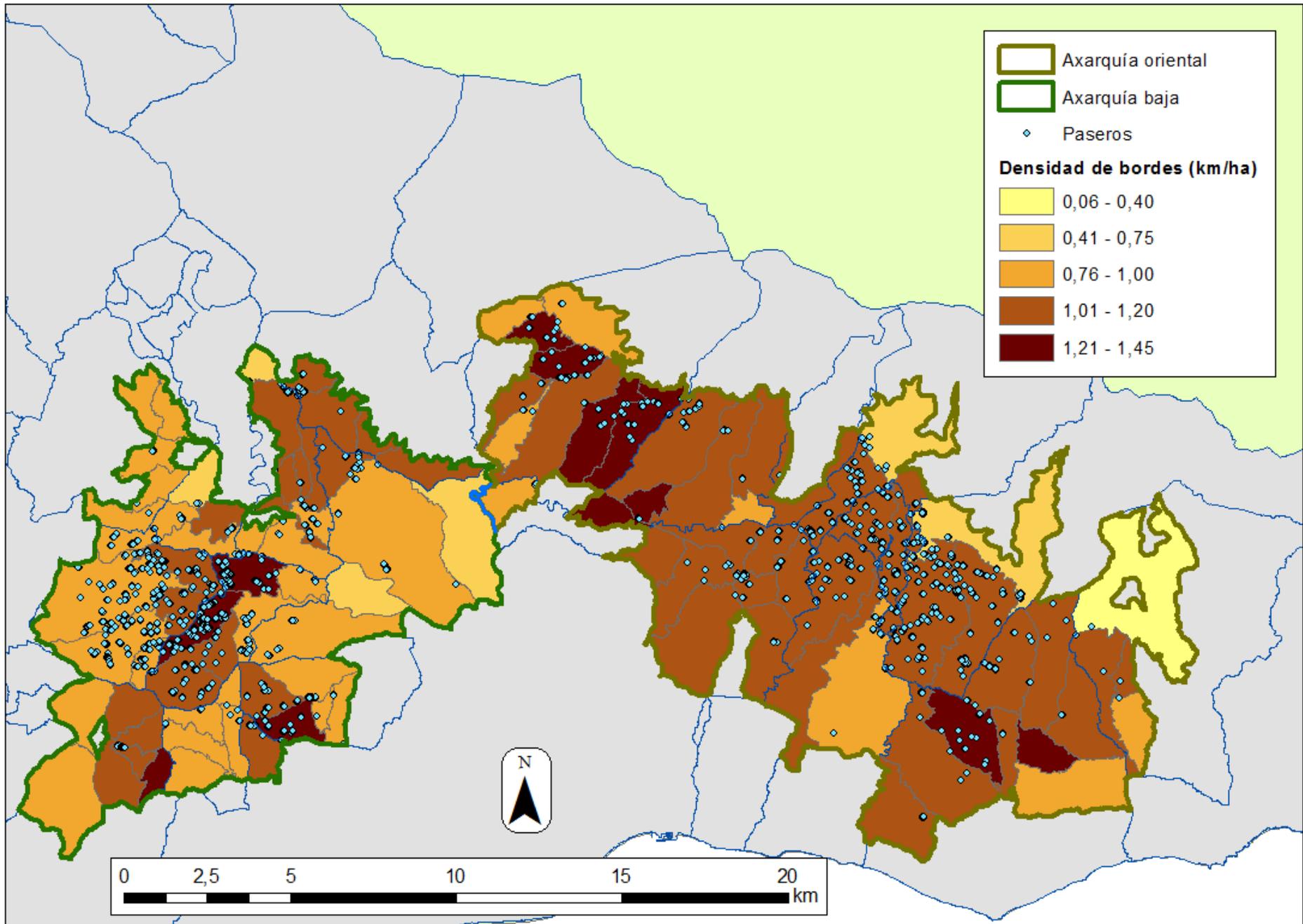
Map 3. Visual basins of drying floors in the whole area

⁶²Laser Imaging Detection and Ranging

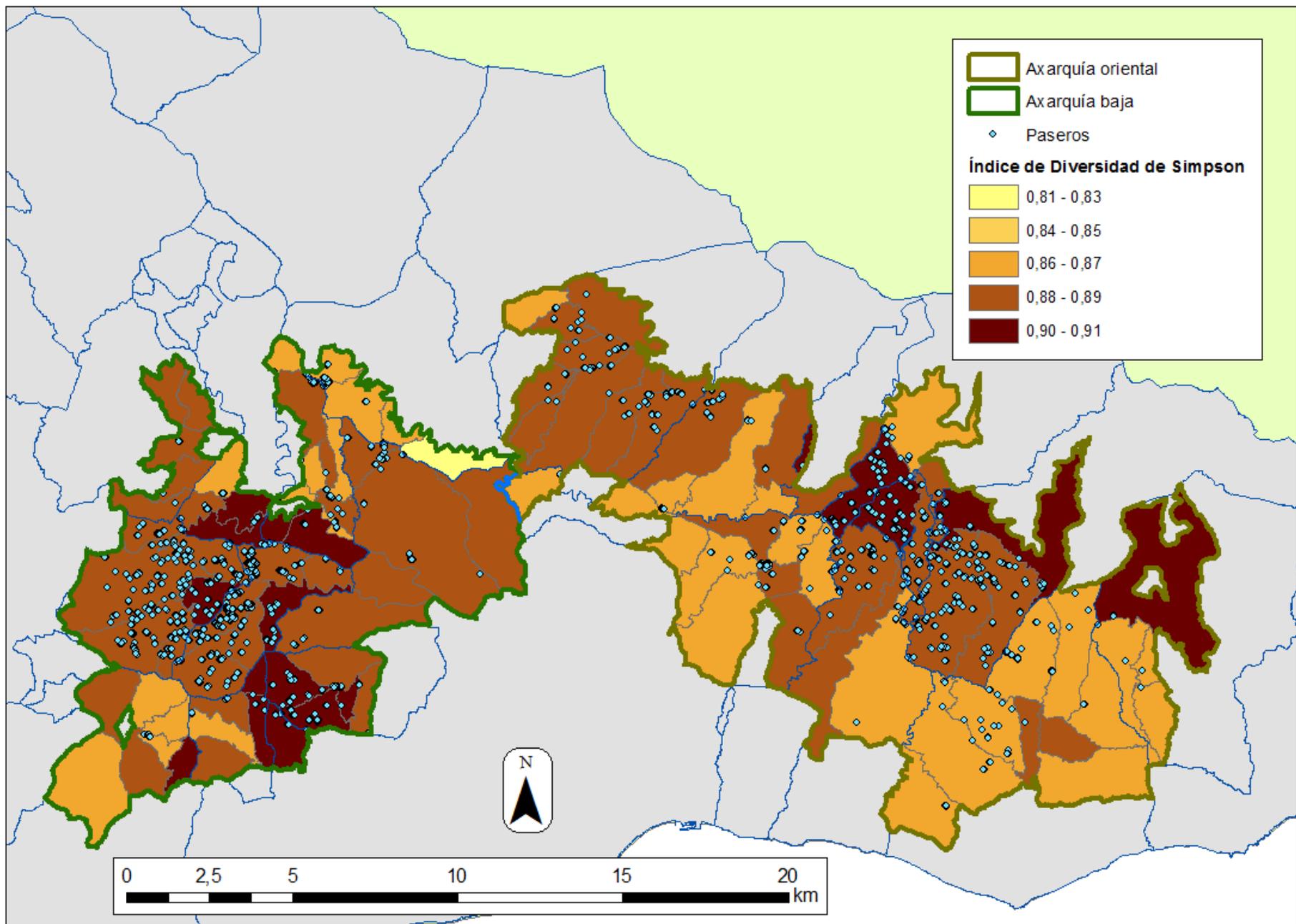
⁶³ A group of drying floors are those individual drying floors which are adjacent and belong to the same farmhouse.



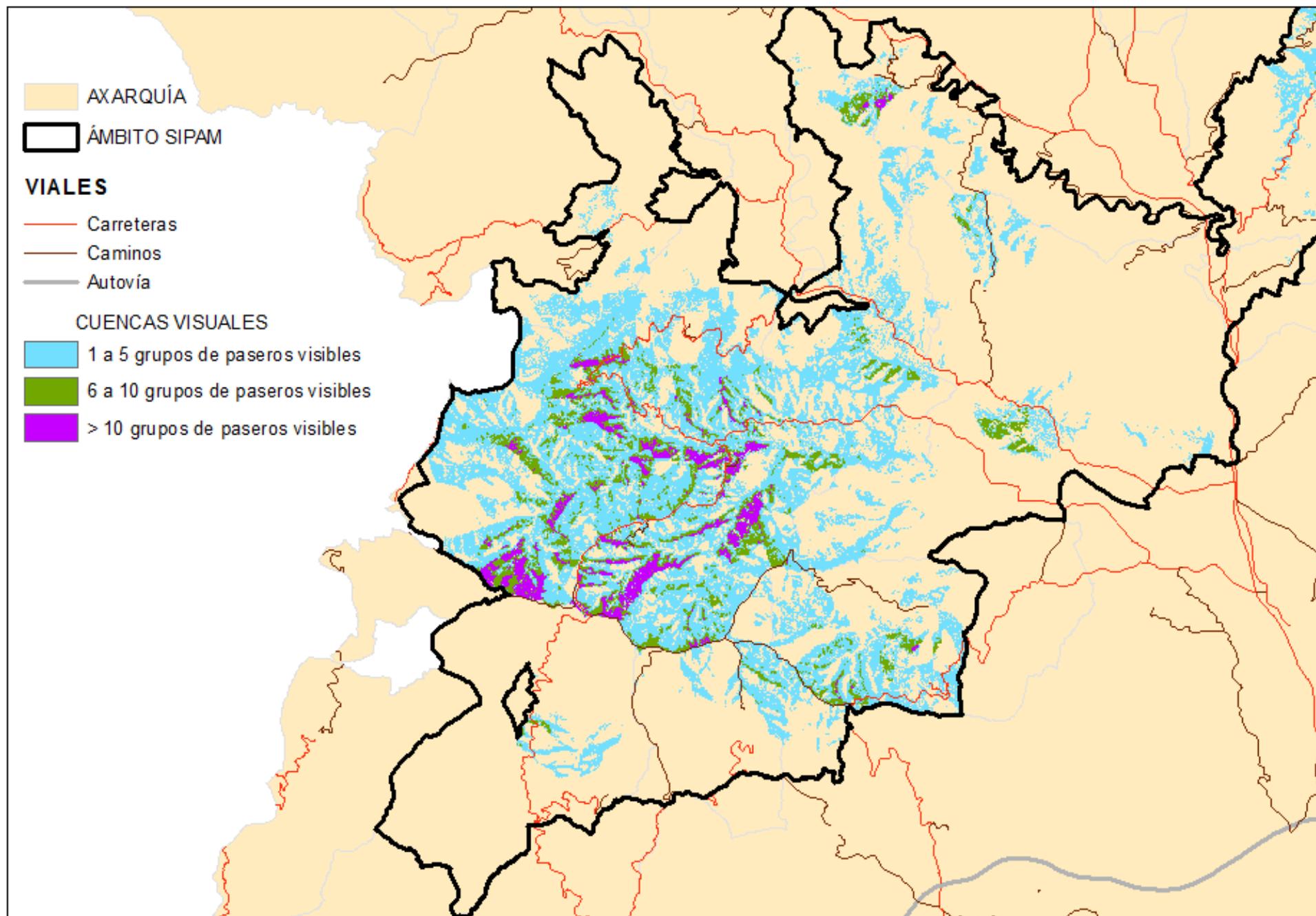
Map 4. Graphical representation of the index of the average size of the patch (ASP)



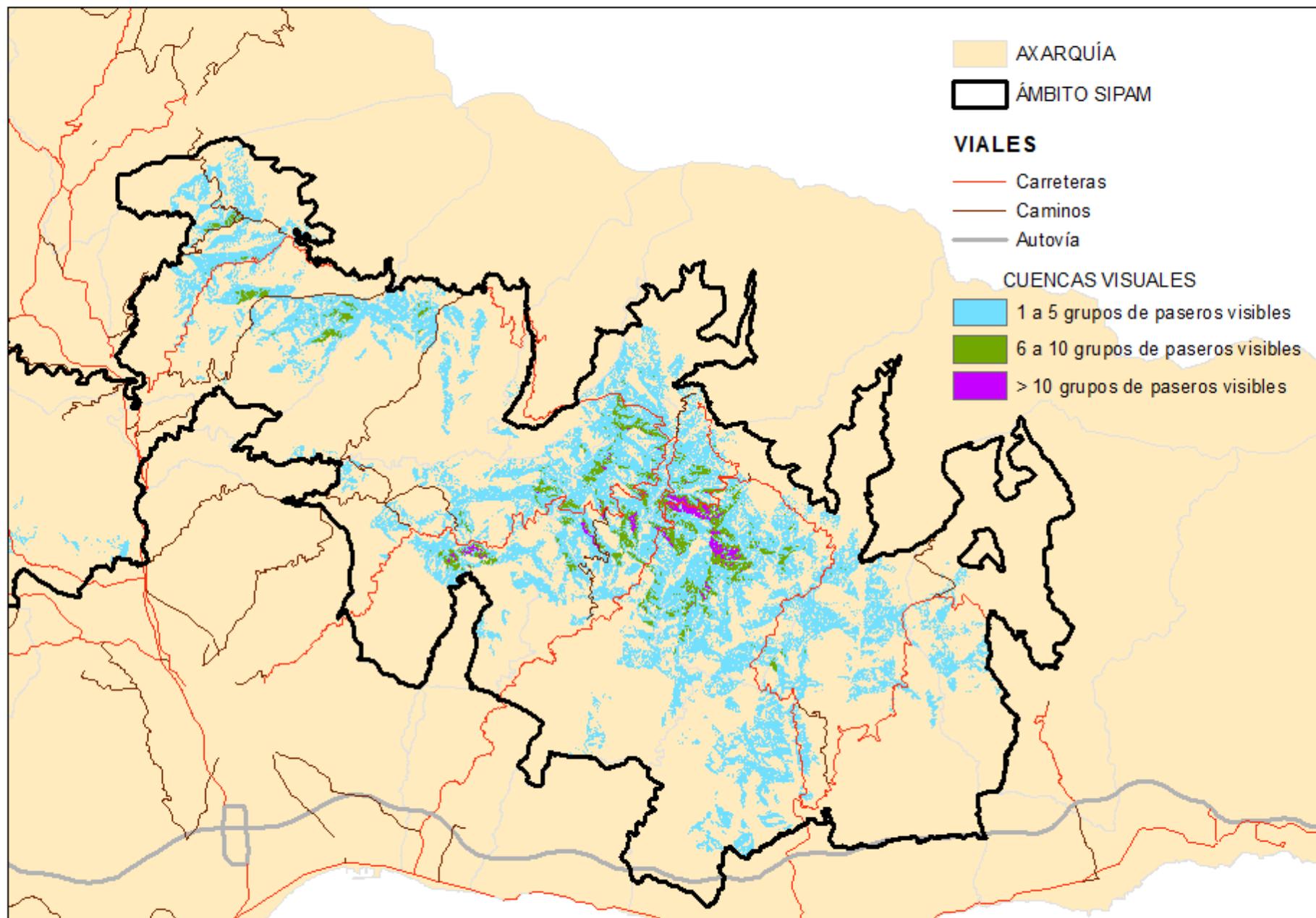
Map 5. Graphical representation of the index for the density of the margins (DM)



Map 6. Graphical representation of the Simpson's diversity index (SDI)



Map 7. Visual basins of the subarea of Low Axarquía



Map 8. Visual basins of the subarea of Eastern Axarquía

b Relationship with the landscape

As Laura Domínguez^{xxxiii} states, La Axarquía has an agricultural landscape of great environmental, cultural and aesthetic value. This territory corresponds to middle-mountain slopes located on both sides of the banks of the river Vélez, a feature that structures the area of La Axarquía and limits two agricultural landscapes. Although both come from the same physical and historical reality, the most recent socio-economic processes are leading to a different evolution in each area, a fact that can be decisive in the future of both the area and the system.

In La Axarquía, vine growing and the subsequent production of raisins both have a major environmental impact as these activities take place in an area with under-developed and shallow soil, with steep slopes and little rainfall but with certain torrential character, which makes it especially vulnerable to erosion and desertification.

In this context, the farming system performs functions that go beyond simple production, such as the conservation of the environment and rural landscapes, the contribution to rural development and even the reflection of the history and the culture of the area.

The landscape^{xxiv} is not only a natural space but something more complex: **it is the overall result, at territorial level, of the interaction between human kind and the environment during long periods of time.** The assessment of the landscape is subject to subjective components and, therefore, it varies according to cultures and historical moments. Landscape is a resource and a cultural heritage of human kind and its history, which is usually more appreciated by tourists than by residents.



Fig. 59. Typical landscape of La Axarquía. Picture by Beatriz Moreno.

The district of La Axarquía is currently very well defined by an agricultural landscape of strong contrasts that has been appreciated by artists, tourists and other observers. This landscape is the result of the combination of three important elements: terrain, some marginal vegetation and human activity (especially agricultural activities). It is made up of a myriad of **small valleys, deep streams and hills where crops are grown along with natural vegetation and where scattered farmhouses contribute to create a singular landscape.**

The most characteristic elements of human activity are the buildings and the typical crops which have been maintained to the present day: vines, olive and almond trees (sprinkled by carob trees), in a not excessive alignment which gives it a low index of artificiality. The image of villages and whitewashed farmhouses located on the hills produces a strong contrast with the greenish ochre of soil. These buildings, especially white farmhouses, have been developed in intimate harmony with the agricultural needs of crops and the way of life developed, thus having a specific architecture aimed at meeting the functions required for grapes drying.

Landscape is extremely dynamic as it changes in time. It is the result of a historical evolution whose beginning dates back to prehistoric times when there were two fundamental elements: the current climate and the human species. Moreover, the landscape was still very similar to the typical natural Mediterranean Holm oak. Since then, we can summarize its evolution to the present into two large periods, first, in the Muslim period, the construction of the typical buildings of the landscape of La Axarquía started with the agricultural activity. It provided an essential aspect to this landscape that can be currently contemplated. On the one hand, they introduced technological advances in agriculture such as terraces to take advantage of the slopes, as well as irrigation ditches and canals. On the other hand, their settlements (located in dense population centres embedded in the slopes and connected by a dense network of roads) allowed the cultivation of vines under rainfed conditions. This landscape would remain virtually unchanged until the end of the 19th century.

The current period is defined by the replacement of traditional crops with the cultivation of subtropical fruits and the incorporation of a series of real estate elements (buildings and infrastructures) in a process of diffuse urban planning that blurs the characteristic landscape of traditional rain-fed agriculture, thus modifying and rebuilding the visual quality of the landscape of La Axarquía.

The uniqueness and beauty of the landscape has been enjoyed and praised by the romantic travellers who, in the 19th century, already visited an area where time seemed to have stopped. But this landscape also charmed visitors with more practical interests. One of them was Agostón Haraszthy, considered the father of California vine-growing and who was interested in buying rootstocks of Muscatel of Alexandria and learning from Málaga vine-growing and raisins production tradition. Thus, in the diary^{xxxiv} he wrote on his expedition, he jotted down his first impressions of the landscape of La Axarquía and its scattered farmhouses⁶⁴.

c Rural architecture related to grapes growing for the production of raisins.

Architecture, agriculture and the development of the family life have formed an indissoluble complex for centuries. Rural constructions, particularly linked to grapes growing in the area of La Axarquía, are a consequence of an ancestral need to seize the opportunities provided by agricultural resources. Farmhouses – known in the area as *lagar* - and all their annexes have been built according to the requirements of efficiency and comfort for work, setting up singular and unique elements, as singular and unique as Muscatel raisins production is.

In an area of high average altitude, the necessary physical spaces for storage, transformation, accommodation, communication, etc., have been adapted to this environment, focusing on a better use of crops for centuries.

⁶⁴“When the Sun rose we were on high mountains, planted of vines from the valleys up to their highest peaks. The appearance of the area was very picturesque as in the high part of the mountains, on their slopes and ravines, there were houses built. It was the first time that I witnessed a practical idea of life in Spain. This is much better than being stacked in small dirty towns. It is not only healthier and more comfortable but also more profitable”.



Fig. 60. Farmhouses as elements integrated in the landscape.

As already mentioned, grapes growing for the production of raisins is considered as a smallholder crop and, therefore, mainly as family farming, what represents a clear exponent of an economy of subsistence in which the approach of the life of all the people involved has been optimising the use of resources and land.

The agricultural buildings linked to Muscatel grapes growing meet the needs of the local people in a sustainable way and adapted to the environment as they have a double use: agricultural and residential. For less than 50 years, the main concern of young couples was owning a farmhouse to be used as first home where they could also develop all the agricultural activities that would enable them to make progresses in life. Therefore, a farm dedicated to the production of Muscatel raisins must have a farmhouse and awnings or drying floors.

i The farmhouse (*lagar*)

Farmhouses of La Axarquía are family houses linked to the production of Muscatel raisins, where there are tools and spaces for all the tasks developed in farming, as well as the food and accommodation needed for the time when critical tasks such as harvesting, processing and grading are developed.

The type of buildings can range from a simple construction with four walls and a roof to a building with several rooms that has been improved as a result of the farm and incomes increase.

Construction materials and techniques have changed over the years. While farmhouses were build with masonry walls and sloped ceilings of wooden beams and hurdle covered with Arabic tiles, no wonder that, over time, they have been built with brick load bearing walls and slabs of prestressed concrete and concrete beams. The current rooms are basically the same as before, with the addition of toilet rooms and single bedrooms. Moreover, the rooms for animals have been reduced.

The arrival of electricity and water was a great advance, both in terms of the comfort of the family and work efficiency. The shade area outside those farmhouses built after 1990 was no longer made of wood but of bricks and plates of insulating material that protected from direct sunlight and rain. The wall and floor materials have also improved. There has been a change from mud and lime rendering to cement mortar; from floors made up of unglazed terracotta to



Fig. 61. Farmhouse. Picture by María Ríos.

terrazzo and stoneware; from old wooden windows to other ones made up of aluminium and, curtains have been replaced by doors, a fact that has allowed to improve privacy in bedrooms.

ii The drying floor (*pasero*)

Drying floors are other fundamental elements. They are structures bounded and prepared to leave grapes exposed to the Sun in order to transform them into raisins naturally but protecting grapes from the rain and the Sun during the drying process at the same time. A drying floor is a rectangular area of 4 metres in width and about 12 metres long located in sun-drenched slopes that do not receive too much wind – thanks to the terrain or to protecting walls of 1 metre tall – it has a regular slope and it is 10-15 cm above the corridors or alleys that bound them. It features a triangular wall in its higher part where awnings are folded.

Another part of the drying floor is the one called *combrero*. It is a support aligned with the slope of the land that starts in the vertex of the triangular wall (kind of headboard) and descends to the lower part of the awning. The *combrero* relies on sticks stuck in the ground, placed at a distance of about 1,5 metre that divide it into two equal parts called *patas* (legs). The *combreros* used to be made of canes but the need for renewal has encouraged to make them with steel or polypropylene tubes. The aim of the *combrero*, together with the triangular wall, is to avoid that awnings touch the berries while they are wet.

On the sides, at about half a metre of the limit of the drying floor, there are two alleys (one at each side) where some stakes are put to secure the awnings which are extended to protect raisins from the Sun or the rain. They are located just about 25 cm above the ground to prevent water from dripping near the drying floor and facilitate the mobility of people.



Fig. 62. Drying floor with grapes exposed to the Sun. Picture by María Ríos.

Alleys are used as pathways for the drainage of rainwater and they can be made up of compacted soil, slate or concrete.

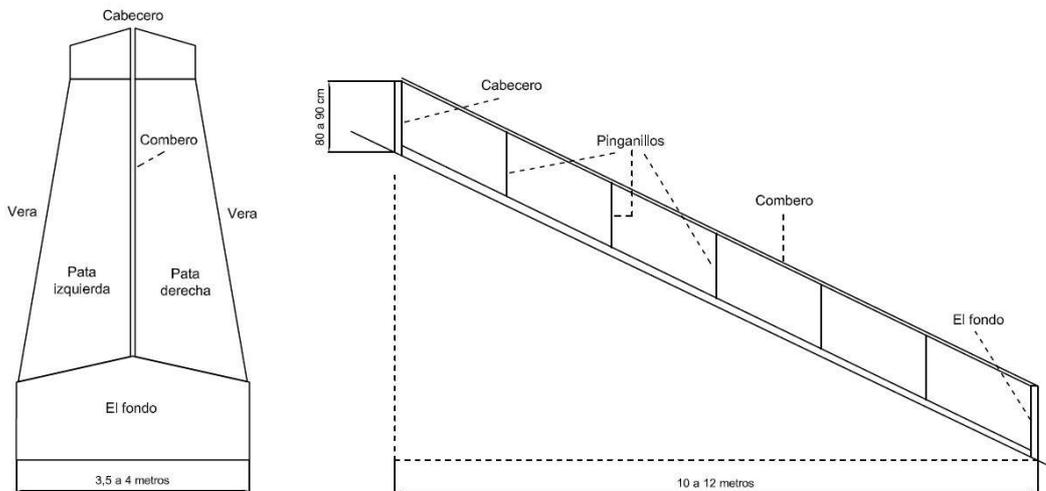


Fig. 63. Diagram of a drying floor

iii Water works

Given the time that people spend in farmhouses in order to produce raisins, the availability of water for human and animal consumption, as well as for toilets and watering orchards, is essential. Therefore, it has been necessary to search, catch and harvest water for the correct management of the farm and for the family.

Water has been usually caught in streams through **wells** of little depth excavated in live rock, what allows to catch clean water and with a constant temperature. Wells are protected from evapotranspiration and from the entry of animals by building a small booth with a door.

Another large water work is the **pool** that allows to store water to irrigate orchards. Sometimes, it's a communal good between close orchards so that irrigation has to be organised in shifts.

The existence of the orchard, the well and the pool, involve the construction of other auxiliary infrastructures for channelling and containment. Containment infrastructures are basically dry masonry walls to create one or several terraced levels to contain the soil of orchards. Pipeling is executed in two ways: on the one hand, there are pipelines from the well to the pool, which was built with buried ceramic pieces and, on the other hand, there are pipelines from the pool to the orchard, consisting of small ditches dug into the land. There are no floodgates because farmers open and close water flow just moving the soil with a hoe. Currently, the water is led through polypropylene pipes and drip irrigation is gaining importance.

iv Communications with vineyards

One of the fundamental aspects of any productive activity is transportation. Due to the steep slopes and to the fact that not all the plots of the farmhouse are always adjacent to it, it has always been necessary to build paths. The paths for mules barely consist of minor connectors made with hand tools who roam the slopes or hills in zigzag. The objective is to facilitate the transition of beasts and people to transport grapes to the drying floors and then, the raisins to stores or cooperatives where they are sold. Ancient paths have been replaced, in part, by rural roads for vehicles, but as not all areas are accessible, part of the old paths are still very useful.

Finally, Annex 10 (Other building elements) provides further information on complementary construction elements.

d **Seasonal changes in vines scenery**

The landscape of La Axarquía experiences an annual evolution that coincides with the seasons and the changes they produce in the phenology of the natural or cultivated vegetation. Therefore, the following seasonal landscapes can be seen:

La Axarquía in spring: when spring comes and temperature begins to raise is when vines vegetative cycle starts. Buds begin to swell (*abotonar*), and the protective scales covering them start to separate. This is when leaves start to



Fig. 64. Spring scenery. Source: Employment workshop on raisins production.



Fig. 65. Summer scenery. Source: Employment workshop on raisins production.

to extend and grow. Everything grows thanks to the water accumulated by the rootstocks during the winter rest period.

La Axarquía in the summer: haze, the result of plants evapotranspiration, reduces the colour contrast of the scenery. However, summer is the most important moment for vines, as it is when they ripen and get their quality. At the beginning of the summer, when veraison occurs, small grape berries begin to turn yellowish and, in the last third of the summer, they reach their optimal point of ripening, with a translucent skin that enables to see their firm pulp. At the end of the summer, with the harvest, the drying floors become a multicolour mosaic with white awnings and a lot of greenish, golden and

ochre nuances. Thickets are in their maximum splendour, poplars are full of foliage and troughs are ridged by the pinkish colour of oleanders.

In autumn: Vine leaves harden, turn their colour to red and fall. During some weeks, while pruning is carried out, fields alternate greenish and ochre colours, with the bluish background of the mountains of Málaga and Macizo de Vélez. Green olive groves contrast with almond trees and poplar trees that lose their leaves.

In winter: Deciduous trees lose their leaves completely, although the landscape keeps the greenery of herbaceous annual and perennial plants, contrasting with slate hills. Vines are completely nude and start their dormancy. In February, large surfaces are dotted with picturesque blossoming almond trees which have inspired so many painters.



Fig. 66. Autumn scenery. Source: Employment workshop on raisins production.



Fig. 67. Winter scenery. Source: Employment workshop on raisins production.

ACTION PLAN FOR THE PROPOSED GIAHS SITE

Table of contents

ACTION PLAN FOR THE PROPOSED GIAHS SITE.....	83
<i>I Methodology.....</i>	<i>83</i>
<i>II Objectives and scope of the dynamic action plan.....</i>	<i>84</i>
<i>III Action plan.....</i>	<i>85</i>
<i>IV Consistency with EU policies. Potential funding opportunities.....</i>	<i>89</i>
<i>V Proposal to create a body to manage the GIAHS.....</i>	<i>90</i>

I Methodology

A participatory methodology has been used to develop the Dynamic Action Plan of Málaga Raisin Production System in La Axarquía, as well as the whole proposal. Concerning the Dynamic Action Plan, the methodology advocated by GIAHS in the document called "A methodological Framework for dynamic conservation of agricultural heritage systems"^{xxxv} has been used, in part, as a reference. In order to perform a successful planning and subsequent implementation of a Dynamic Conservation Plan for the GIAHS, this document sets the following methodological framework:

1. Establishing a strategy for national participatory planning: establishing objectives and an organizational framework.
2. Identifying the characteristics and key dynamics of the GIAHS, thus understanding the factors which have a positive and negative impact on the performance of a GIAHS.
3. Identifying the main tools and best practices for the dynamic conservation of the GIAHS.
4. Developing and implementing the Dynamic Action Plan of Málaga Raisin Production System in La Axarquía.
5. Monitoring the progress of the plan.
6. Disseminating the results.

In Spain, the first point has not been started yet from a national point of view. However, since competences in agriculture are, mostly, transferred to the autonomous communities, the Regional Ministry of Agriculture, Fisheries and Rural Development of Andalusia has carried out this analysis, through the Agency for the management of agriculture and fisheries of Andalusia. This analysis has concluded that the production system of Málaga raisins meet the criteria established for GIAHS and, therefore, it has the characteristics necessary to submit a proposal. This is why, the Vice-Ministry of Agriculture of Andalusia communicated it to the Spanish Ministry of Agriculture and Fisheries, Food and Environment on June 5, 2017 (see Annex 11 section b).

On the other hand, at local level, several local institutions have shown their support to this proposal (see Annex 11).

At this point, the tasks to start working on the identification of the characteristics and key dynamics of the GIAHS (point 2), along with the local actors, began with the settlement of a Technical Committee (see Annex 12), and the organisation of a Conference (Annex 13 chronologically shows the activities and tasks developed by this Committee). The group of experts has actively participated in the identification of those factors that threaten the stability of the system and the degradation processes it suffer, concluding with a list of threats and needs that will be used as a starting point to implement further actions. Moreover, the capacities of the different local actors have been also identified and, the different forms of social organization and the institutions or bodies that can work in the system have been analysed too.

The main tools and best practices for the dynamic conservation of the GIAHS have been identified by the Technical Committee using a survey that was forwarded to various actors of the sector and filled in by the Committee itself. Thus, meetings have been held to compile the surveys properly filled out by the municipalities of El Borge, Almáchar and Moclinejo, as well as by the cooperative UCOPAXA that has also gathered different surveys. In total, the 55 surveys received have served to establish, prioritize and detail the measures and actions established in the Dynamic Action Plan of Málaga Raisin Production System in La Axarquía.

This document aims to be the starting point for the development and implementation of the Dynamic Action Plan (point 4) and the subsequent dissemination of results, that can serve as an example to future proposals (point 6). In addition, it also aims to set the indicators to monitor the plan (point 5).

II Objectives and scope of the dynamic action plan

1 Purpose

Improving the sustainability of the system and ensuring the transmission of the agricultural heritage and knowledge to future generations thanks to international recognition.

2 Objectives

1. Improving the capabilities of the area of La Axarquía to react to ecological, social, economic and cultural changes by using endogenous mechanisms.
2. Improving the economic sustainability of the system by including agricultural, commercial or tourism (agro-tourism) aspects, among others.
3. Preserving and transmitting the traditional agricultural heritage of the area, thus allowing to integrate traditional knowledge into modern knowledge, in a way that can make the management of natural resources more effective.

3 Scope

The Dynamic Action Plan of Málaga Raisin Production System in La Axarquía, brings together a series of operations, grouped into measures and strategic lines, easy to implement, that respond to today's threats and challenges for the system and that can be implemented through national, regional or local funding without prejudice to future private contributions that the system may receive.

The action plan will be implemented using a multi-stakeholder approach, involving different local entities. Its scope will be multi-sectoral and intergenerational, involving different sectors, such as the agricultural or tourism ones, and people of all ages, thus trying to ensure the transfer of knowledge.

III Action plan

1 Threats and challenges

1. Decrease of the producing area.
2. Low profitability due to the terrain (because it limits the use of machinery), to the great age of plantations and to the poor agricultural performance.
3. Marketing stagnation of the product due to little diversification, to low industrial use and to the decrease in consumption because it has seeds.
4. Family labour diverted to more attractive sectors. This fact makes it necessary to hire staff and this makes the product even more expensive.
5. International competitors with significantly lower prices and seedless varieties.
6. The exogenous tourism initiatives launched have had little success.
7. Progressive ageing of the agricultural population and scarce transition of one generation to the next. This fact endangers the transmission of the agricultural and cultural heritage.
8. Serious pressure from urban development as evidenced by the abandonment of the farmhouses architectural tradition, which endangers the landscape uniqueness.
9. Soil erosion due to atmospheric agents - mainly rain water -, which becomes even more evident in areas where cultivation has been abandoned.
10. Lack of knowledge about raisins culinary and nutritional properties and the benefits of their consumption.
11. Declining mules population.

2 Needs

A series of needs faced by the sector to improve its current situation have been extracted from the SWOT analysis. Therefore, the sector needs to:

- A) Improve the economic sustainability of the system. This will be done by improving marketing and means of production, introducing new technological improvements and promoting research and development.
- B) Improve the social sustainability of the system. This aims at setting the population to the territory, strengthening the identity of the community and improving the knowledge of society about the system.
- C) Improve the environmental sustainability. This will be done by fighting against erosion as a basic pillar, promoting biodiversity and landscape conservation.
- D) Ensure the transmission of the agricultural heritage and promote it to society.

3 Strategic lines and measures

The measures intended to be carried out have been organised around 5 strategic lines of action. These strategies and the measures they include relate to the needs of the action plan.

a Strategic line 1: Conserving and improving the productive system.

Measure 1 .- Conserving the traditional drying floors.

Operation 1.1.- Creation of a georeferenced register of traditional drying floors and vines.
This operation has already been developed. The outcomes are shown in Map 11. (Map of the distribution of drying floors).

Operation 1.2.- Urban protection of the traditional drying floors.

Operation 1.3.- Promoting the conservation of these structures.

Measure 2 .- Conserving the means of production.

Operation 2.1.- Improving the environmental sustainability.

Operation 2.2.- Conserving and improving crops.

Operation 2.3.- Maintaining and conserving mules population.

Measure 3 .- Technological improvements.

Operation 3.1.- Automating awnings.

Operation 3.2.- Improving the sun-drying system.

Operation 3.3.- Improving tools, agricultural machinery and farming techniques.

Operation 3.4.- Implementing telematic control systems during grapes production and drying

Measure 4 .- Actions to prevent the abandonment of vine growing.

Operation 4.1.- Promoting producers associations.

Operation 4.2.- Promoting entrepreneurship and raisins production among young people

b Strategic line 2: Improving marketing strategies

Measure 5 .- Promotion.

Operation 5.1.- Promotion on social networks and on those related to the location of consumers.

Operation 5.2.- Promotion in retail outlets, food fairs and sports events.

Operation 5.3.- Development of promotion joint actions combining production, marketing and tourism

Measure 6 .- Synergies between companies. Business collaboration

Operation 6.1.- Coordination between companies to launch generic advertising campaigns and incorporate innovation.

Operation 6.2.- Making the most of the synergies between similar products produced in the area: oil, honey, wine, almonds, figs, etc.

Measure 7 .- Product diversification

Operation 7.1.- Promoting the use of new packaging formats and presentations

Operation 7.2.- Promoting the development of new derivative products for new sectors and market niches (ice cream, pastry, energy bars, etc.).

Measure 8 .- New marketing approaches.

Operation 8.1.- Promoting online marketing.

Operation 8.2.- Boosting marketing in specialised shops and emerging markets (organic, slow food, fair trade), along with other local products

Operation 8.3.- Promotion of international business lines

c Strategic line 3: Conserving and transmitting agricultural heritage

Measure 9 .- Handicraft linked to the productive system.

Operation 9.1.- Creation of an inventory of traditional tools and utensils used for the production of raisins

Operation 9.2.- Conserving tools and utensils used for raisins production

Measure 10 .- Conserving and transmitting the heritage used for production.

Operation 10.1.- Transmitting production and processing techniques to the young people living in the producing area

Operation 10.2.- Strengthening the knowledge and sense of belonging to a special and valuable sector among the children of the producing area

Measure 11 .- Conserving and transmitting cultural richness.

Operation 11.1.- Promoting and conserving festivals and ludic aspects related to raisins

Operation 11.2.- Promoting and conserving the artistic and cultural manifestations related to raisins

Measure 12 .- Administrative aspects.

Operation 12.1.- Creation of departments or specific offices in the local councils to support producers.

Operation 12.2.- Promoting the creation of associations related to the conservation of raisins producing system.

d Strategic line 4: Promoting tourism.

Measure 13 .- Tourist itineraries.

Operation 13.1.- Relaunching the Route of the Raisins by creating synergies with other routes such as the Muscatel wine route

Operation 13.2.- Designing new guided tourism products to be held throughout the year

Operation 13.3.- Promoting the network of tourist accommodation by creating new services

Operation 13.4.- Creating photo-tours with specific points of interest

Measure 14 .- Gastronomy.

Operation 14.1.- Promoting the different dishes made with Málaga raisins in the restaurants of the area. Some actions of this operation have already begun, such as the Cooperation Protocol in order to showcase the Muscatel products in

cooking, signed between the Association Muscatel, the Union of raisins cooperatives of La Axarquía, UCOPAXA, the winery Dimobe and Natividad Diaz Mercado, award to the Best Mediterranean Cook MEDCHEF (see Annex 7).

Operation 14.2.- Writing a book of recipes focused on raisins and Muscatel wine.

Measure 15 .- Involving citizens in agricultural tasks.

Operation 15.1.- Promoting the participation in activities at key moments by organized tours

Operation 15.2.- Promoting programmes to link urban and rural environments such as a programme called "adopt your vine"

Operation 15.3.- Promoting visits of schools and other groups during harvesting, drying, removal of raisins and festivals.

e Strategic line 5: Research and dissemination.

Measure 16 .- Research.

Operation 16.1.- Promoting and participating in medical research

Operation 16.2.- Collaborating with the European Institute of Mediterranean food (Spanish acronym IEAMED) on aspects related to the Mediterranean diet.

Operation 16.3.- Promoting and participating in research on the effects of climate change on grapes growing and raisins production

Operation 16.4.- Promoting the exchange of experiences and technology with territories where Muscatel grapes are grown

Measure 17 .- Conducting studies.

Operation 17.1.- Generating information on the actors involved in the GIAHS to improve and optimise the activities developed

Operation 17.2.- Conducting market studies in relation with raisins.

Operation 17.3.- Promoting ethnographic and socio-economic studies related to raisins.

Measure 18 .- Regarding the recognition as a GIAHS.

Operation 18.1.- Disseminating the recognition as a GIAHS.

Operation 18.2.- Developing a web page.

Operation 18.3.- Creation of the GIAHS Association that will manage the measures included in the Action Plan.

Operation 18.4.- Obtaining information on the impact of the actions on the sustainability of the system.

Annex 14 (Factsheets of the measures included in the Dynamic Action Plan) details the various operations included in each measure and their specific objectives, including prior information on the organisations that may implement the operation, a schedule for the actions and comments and ideas to be applied in each operation. Moreover, Annex 15 (Indicators of the Dynamic Action Plan) details the indicators corresponding to this Dynamic Action Plan.

IV Consistency with EU policies. Potential funding opportunities

The **European Structural and Investment Funds** (EIS funds) are the key instrument to tackle the implementation of the Europe 2020 Strategy, a programmatic policy document of first level that sets out the major objectives and instruments for a Smart, Sustainable and Inclusive Growth in the EU.

The EIS funds allocated to Spain for the period 2014-2020 are as follows:

- European Regional Development Fund (ERDF),
- European Social Fund (ESF),
- European Agricultural Fund for Rural Development (EAFRD)
- European Maritime and Fisheries Fund (EMFF).

These funds are executed through different **Programmes**, some of them managed by the Central State Administration (which include actions for the entire Spanish territory), and others managed by the Autonomous Communities.

As far as the measures proposed in this Dynamic Action Plan are concerned, the main source of European funding would come from the EAFRD, which in Andalusia is managed through the **Andalusian Rural Development Programme 2014-2020** (hereinafter **RDP**).

Therefore, within the RDP, there are measures that could respond to specific measures proposed in this Dynamic Action Plan, where the following can be highlighted:

- Measures 1 and 2 of the RDP, which support **training, knowledge transfer** (including studies and reports) and the creation of **advisory services** in a large number of thematic areas: agriculture, environment (land management, residues...), specialized training, etc.
- Measure 3, which supports the participation of farmers in **seals of quality**, as well as in their promotion activities.
- Measure 4 of the RDP, covering a wide range of eligible **investments**:
 - Investments related to the productive improvement of farms.
 - Investments related to the transformation (industrial processes), marketing or development of new products.
 - Investments related to shared infrastructures for farms⁶⁵.
 - Investments related to the environmental or landscaping improvement of the farms, which are not strictly related to productive aspects⁶⁶.
- Measure 6 that encourages the **settlement of young farmers**.
- Measure 9, which supports the creation of **groups of producers**.
- Measures 10 and 11 which, respectively, encourage farmers to voluntarily take up **agro-environmental practices** or change into **organic farming**.

⁶⁵ Rural roads, common infrastructures...

⁶⁶ Gully repairs, planting of trees, installation of drinking trough for animals, conservation of traditional and unique elements of the agricultural landscape, etc.

- Measure 16, which support expenses resulting from various forms of **cooperation**, with emphasis on cooperation in **innovation** as well as cooperation for the implementation of **short supply chains or local markets**.
- Measure 19 under which **LEADER** projects are carried out. Beyond agriculture and agricultural farms, these projects would respond to actions in the area of **economic diversification**, such as **tourism, culture, interaction between the agricultural sector-society, etc.**; or **improving the overall quality of life** of the whole rural area.

The RDP has a budget of about **€ 2,450 million of public expenditure**, of which almost 80% comes from European funds (EAFRD) and the rest is jointly funded by the Regional Government of Andalusia and the Central State Administration.

In addition to the RDP and EAFRD, other possible sources of European funding are ERDF, particularly in relation to investments in research, development and innovation, large-scale investments (major infrastructures, urban improvements) or non-agricultural investments not included in the LEADER programme.

With regard to the ESF, it could eventually support initiatives aimed at the undertaking of this Dynamic Action Plan, including the training of farmers and other professionals of related activities.

In addition, support will be sought from other institutions (provincial councils, municipalities), associations and private investment, to implement the measures and operations included in this plan.

V Proposal to create a body to manage the GIAHS.

The creation of a GIAHS **management** body is essential to maintain the designation, in case FAO awards it. But basically, this management body would be **essential to implement the measures included in the Action Plan to Conserve Muscatel Raisins. An Action Plan that has to be submitted to the FAO to carry out** a dynamic conservation of the area as well as define the way to address the threats and challenges the system faces.

It is important to note that implementing the measures included in this Action Plan to Conserve Muscatel Raisins will require a series of local actors who will organise and guide its implementation so, these people or bodies involved should be established in the area concerned.

The GIAHS management body created to implement the Action Plan to Conserve Muscatel Raisins could adopt the nature of a non-profit association. This is a status that has been successfully used by other bodies with a large experience in the district of La Axarquía, like the previously mentioned APTA or CEDER. This legal status allows the involvement of a wide range of bodies or institutions: Local Councils, Associations, Agricultural Professional Organisations, the Regional Government of Andalusia, CEDER, Local Action Groups, Regulating Boards of the Protected Designation of Origin, etc.

Moreover, the existence of a body in charge of implementing the measures of the Action Plan will guarantee that the plan will be implemented.

1 Name suggested for the future Association

GIAHS Málaga Association (Association SIPAM Málaga). Association to Conserve Málaga Raisin Production System in La Axarquía, as a Globally Important Agricultural Heritage System.

The GIAHS Málaga Association will comprise associations shown in Fig. 68. Most of these associations have already expressed their support to the proposal and some of them have promoted the initiative, having participated in the tasks developed by the Technical Committee. All of them have a common objective, conserving Málaga raisins, and each one, within its competences and statutory purposes, will be able to work from a different point of view easily, with skills and recognized faculties, for the benefit of the common objective.

2 Proposal for the management structure of the Association

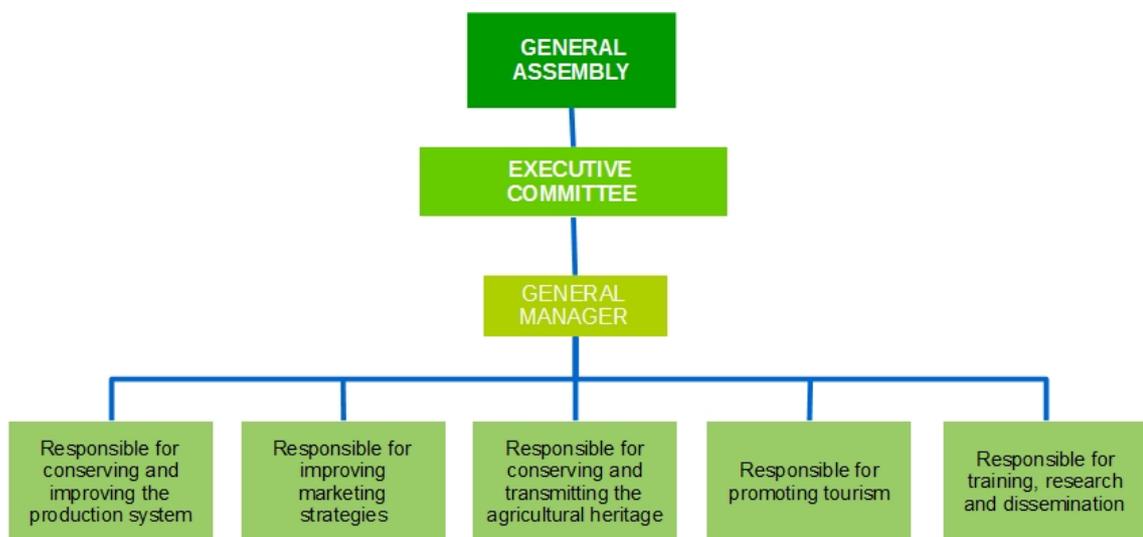


Fig. 68. Management structure of the GIAHS Málaga Association.

Table 7 shows how each organization will play a role in the management of the strategies to implement the Dynamic Action Plan according to their knowledge and skills and as organised in the diagram of the organisational structure proposed.

In addition to the entities above mentioned, the following bodies will support the development of the GIAHS Málaga Association within their possibilities, competences and statutory purposes,:

- Regional Ministry of Agriculture, Fisheries and Rural Development of Andalusia.
- Provincial Government of Málaga.
- Centro de Desarrollo Rural CEDER Axarquía. (Rural development centre of La Axarquía - CEDER-Axarquía)

Actors involved in the management of the Dynamic Action Plan.	
Strategic lines	Actors involved in the Association
Maintaining and improving the productive system.	Agricultural Professional Organisations: ASAJA, COAG and UPA. Other cooperatives which will be interested in participating.
Improving marketing strategies	Union of raisins cooperatives of La Axarquía.
Conserving and transmitting the agricultural heritage	Association MUSCATEL of Almáchar. Local councils of the raisins producing area.
Promoting tourism.	Asociación para la Promoción Turística de la Axarquía, APTA. (Association for Tourism Promotion in La Axarquía) Local councils of the raisins producing area.
Research and dissemination.	Regulating Board of the Protected Designation of Origin "Pasas de Málaga" (Málaga raisins).

Table 7 Actors involved in the different strategic lines of the Dynamic Action Plan

3 Initial support for the Management of the Dynamic Action Plan

Managing the Action Plan requires experience and the appropriate economic support to develop the different tasks. The Dynamic Action Plan of Málaga Raisin Production System in La Axarquía, will not require great economic investments, but, undoubtedly, activities require economic and human capital, as well as experience and professionalism. Therefore, the Regional Ministry of Agriculture, Fisheries and Rural Development of Andalusia has been proposed to support to the GIAHS Málaga Association in the management of the Dynamic Action Plan through Agencia de Gestión Agraria y Pesquera de Andalucía (Agency for the Management of Agriculture and Fisheries of Andalusia) for the first two years. After that period, Málaga GIAHS Association will continue with the management of the Plan.

ANNEXES

2 Boundaries of the GIAHS area

The boundaries of the GIAHS area have been marked using the plots where raisins are grown⁶⁷ and the distribution of the traditional drying floors of the area⁶⁸. The Map 10. and Map 11. show the distribution of the plots declared as used for raisins production as well as the drying floors per municipality. Based on this information, the area proposed to be declared as GIAHS has been administratively defined as the intersection of the cadastral areas where there are traditional drying floors and also vine-growing plots for the production of raisins and which are located under 800 metres of altitude. Those cadastral areas in which there are no drying floors but have more than five plots for the production of raisins, have been maintained.

The Map 12. shows the area suggested to be declared as GIAHS, as well as the location of the traditional drying floors and the plots for raisins production. The area is also divided into two subareas with geomorphological differences and separated by the valley created by the river Vélez:

1. **Eastern Axarquía:** area with a lower density of traditional drying floors (see Map 13.) and plots for raisins production. It has ravines and it is a little bit more evolved concerning landscape and land uses. They are different from the western area.
2. **Low Axarquía:** area with a higher density of traditional drying floors and plots for raisins production. It has a landscape in which the traditions of the raisins system and the land uses are better coping with the current threats. The municipalities with the greater production of raisins are located in this area.

The Map 14. shows the location of both subareas on the topographic map of Andalusia and Map 15. and Map 16. shows the same information but on a lithological map of Andalusia.

The area established has a total surface of 28,039 hectares distributed as follows: 16,513 hectares in the subarea of the Eastern Axarquía and 11,526 hectares in Low Axarquía.

Table 8 shows the following information for each municipality: the subarea where it is located, the number of cadastral areas of each area, the number of drying floors, the area used for raisins production, the vines used for other purposes, other crops grown, the unproductive area and the total area. The municipality of El Borge is the one with the greatest number of drying floors and the biggest area dedicated to raisins production.

The GIAHS area comprises:

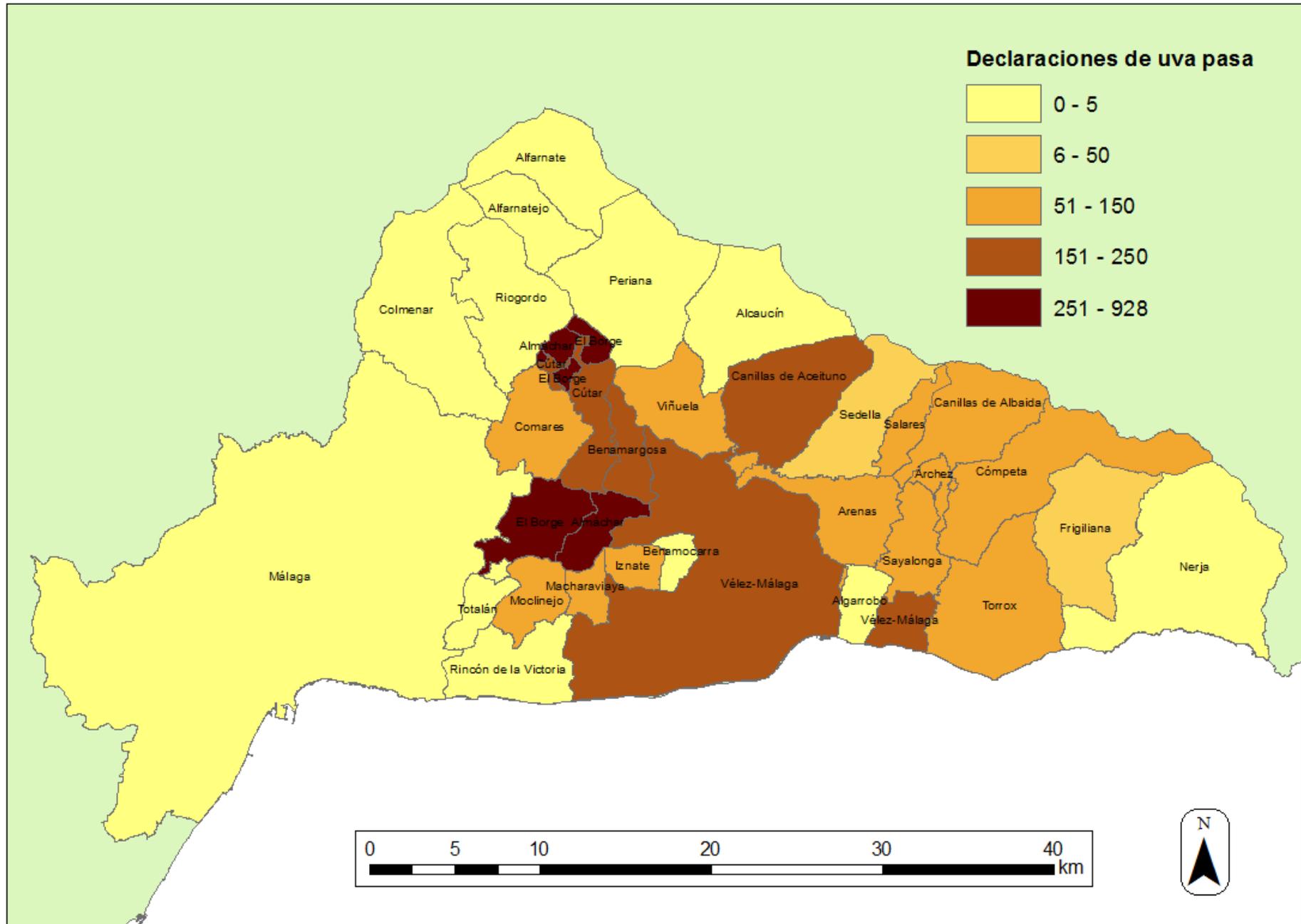
- A) **Active area:** the area which is currently producing raisins and which represents 1,075 hectares.
- B) **Potential area:** the area used for any kind of agricultural activity that, as it is included in the GIAHS area, has an easy access to a drying floor. It is an area of 13,348 hectares of which 1,570 (11.8%) are already producing grapes.
- C) **Other areas:** this section includes the remaining area with non-agricultural use, such as currents and bodies of water, roads, buildings, forest areas, unproductive areas, greenhouses and protected crops, grassland, pastures and urban areas.

⁶⁷Information obtained from the raisins declarations for the single payment scheme.

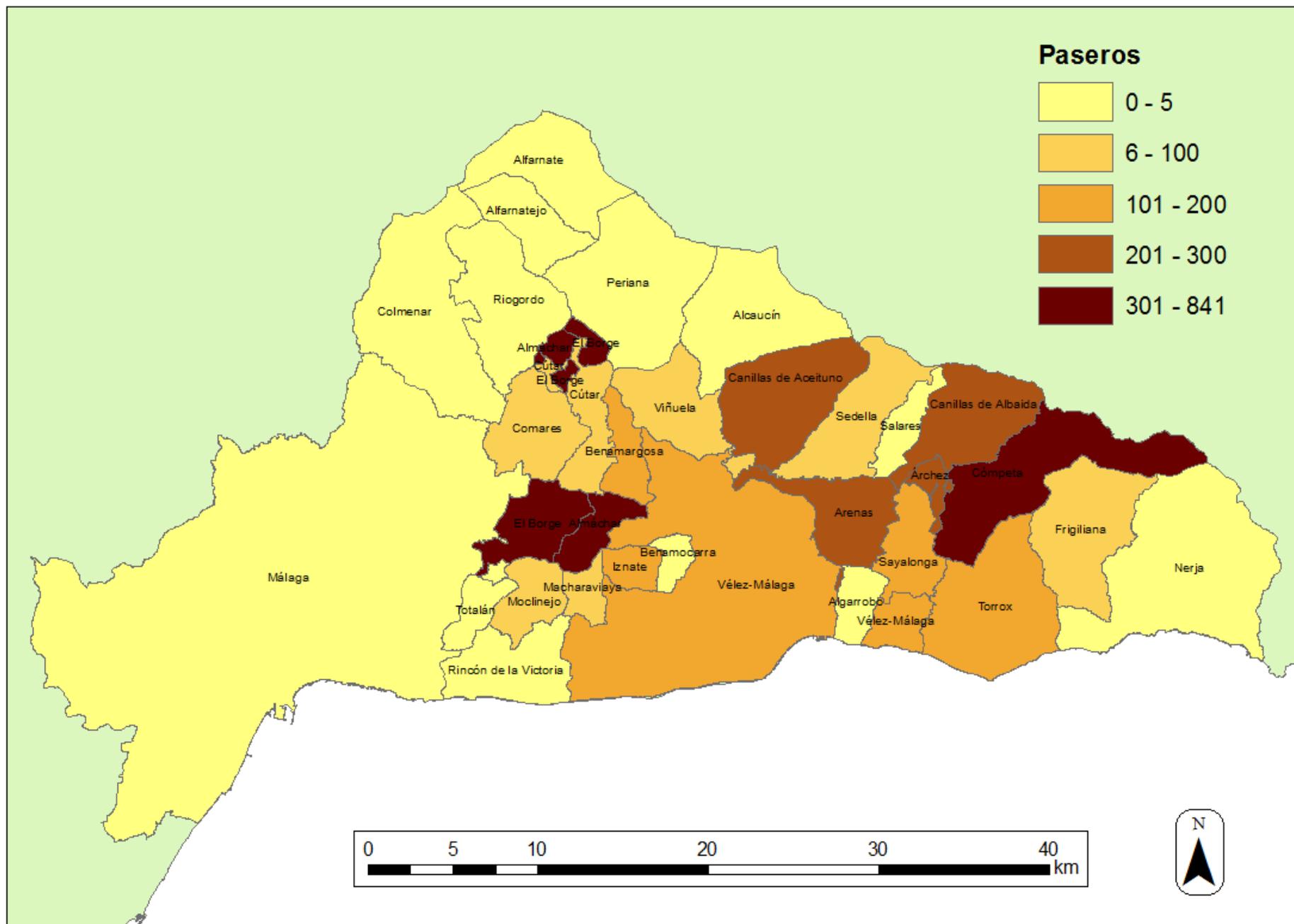
⁶⁸ Drying floors photo-interpreted using satellite images.

Subarea	Village	No. cadastral areas	No. traditional drying floors	Raisins area	Another areas vine	other crops grown	Another areas	Total area
Axarquía - Baja	Almáchar	6	719	203	77	402	454	1.136
	Benamargosa	10	126	49	84	552	330	1.014
	El Borge	6	841	353	116	462	760	1.691
	Comares	5	19	19	21	379	270	689
	Cútar	4	72	59	37	197	229	523
	Iznate	5	185	43	41	428	255	768
	Macharaviaya	5	29	16	44	195	364	619
	Moclinejo	7	30	22	39	602	749	1.411
	Vélez-Málaga	6	174	68	111	1.593	1.099	2.871
Viñuela	5	66	27	36	331	410	804	
Axarquía - Oriental	Árchez	2	293	27	102	184	167	480
	Arenas	8	204	28	82	1.221	721	2.053
	Canillas de Aceituno	9	202	43	99	780	1.436	2.357
	Canillas de Albaida	3	220	30	92	322	441	885
	Cómpeta	3	613	27	189	576	1.118	1.910
	Frigiliana	4	10	3	21	434	1.139	1.596
	Salares	3	2	19	30	118	76	243
	Sayalonga	3	189	12	135	827	844	1.818
	Sedella	6	65	13	74	791	886	1.764
Torrox	9	181	13	142	1.383	1.870	3.408	
TOTALES		109	4.240	1.075	1.570	11.778	13.616	28.039

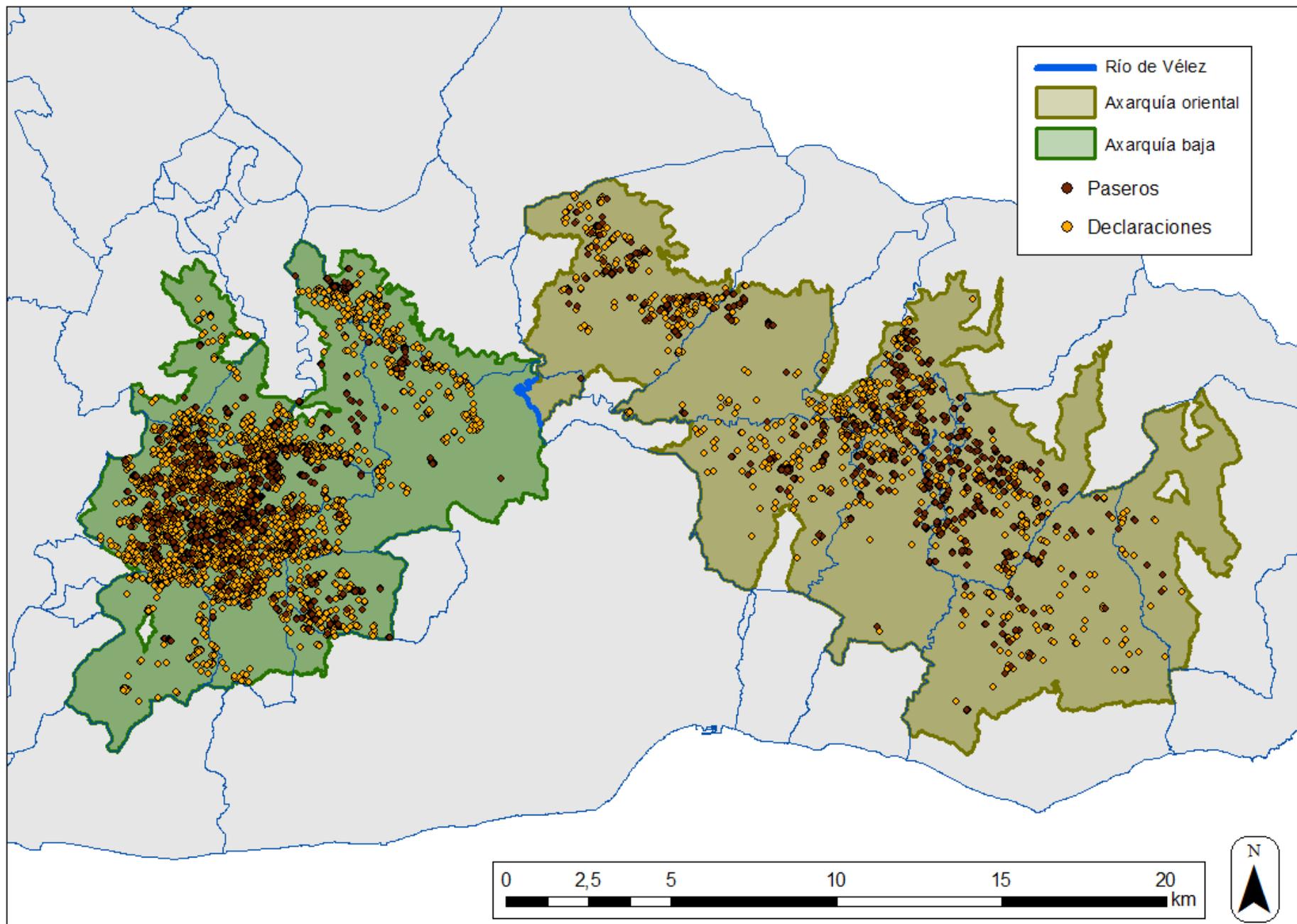
Table 8 Characteristics of both subareas. Surface shown in hectares.



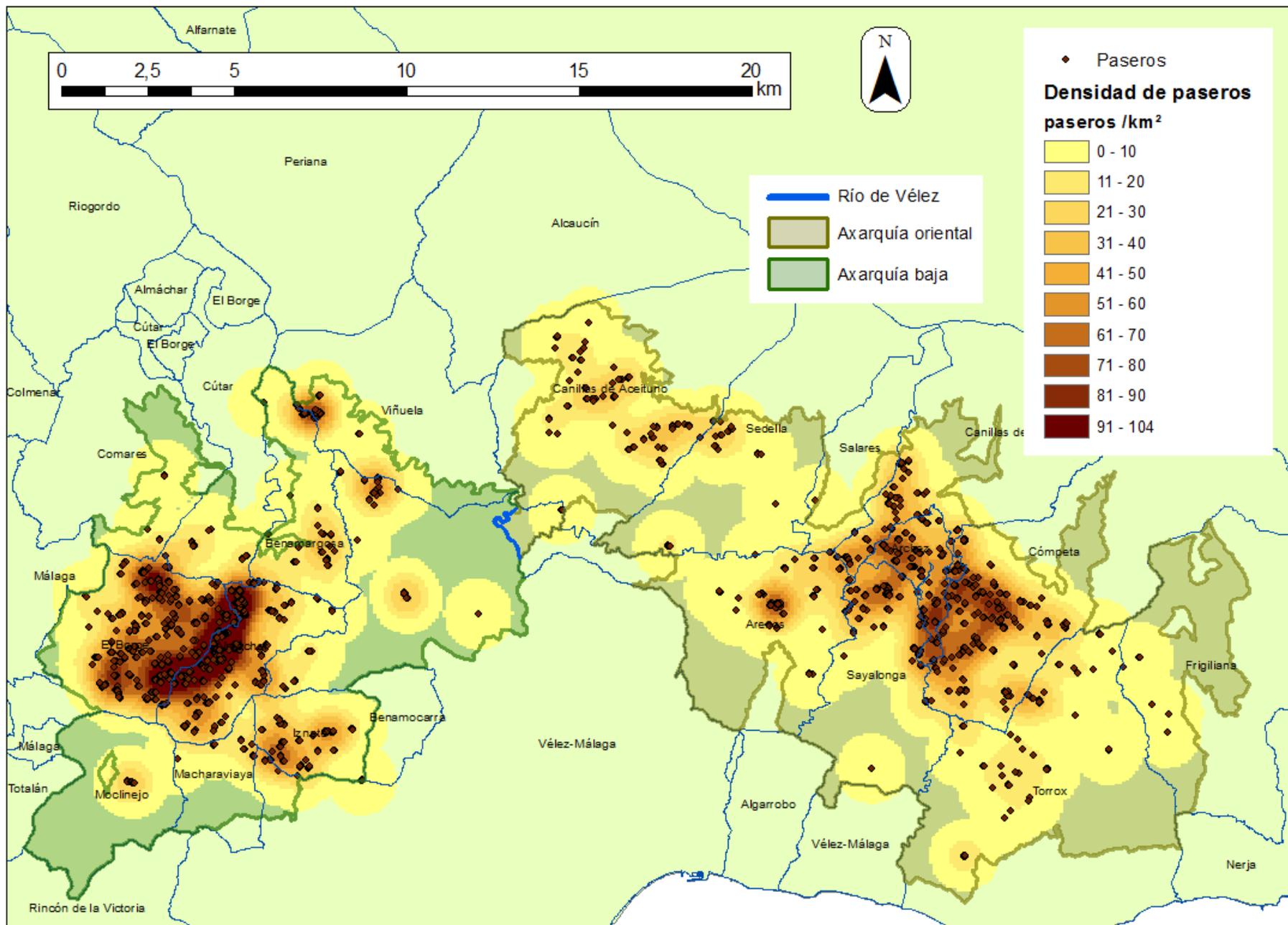
Map 10. Map of the distribution of the plots dedicated to the production of raisins.



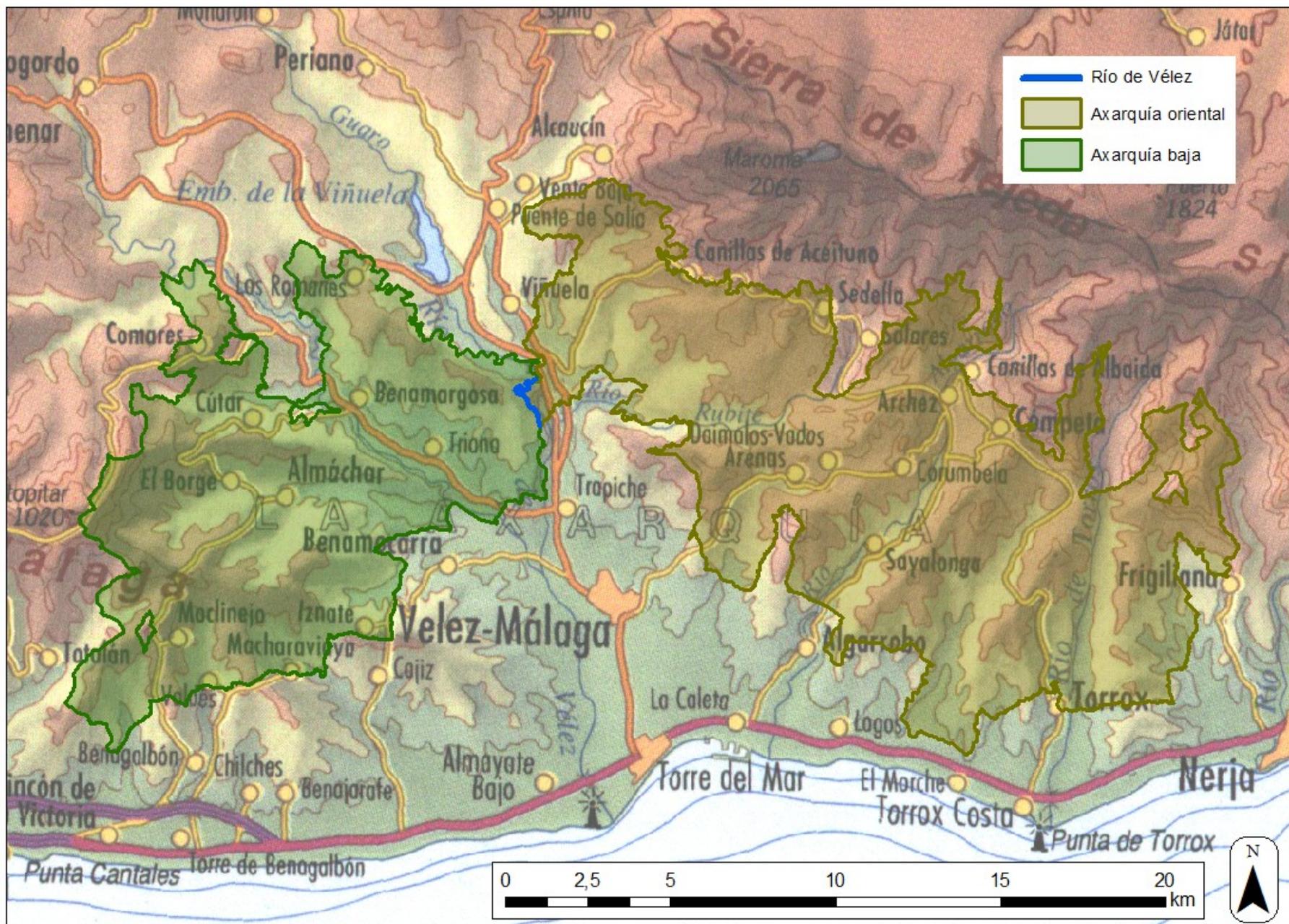
Map 11. Map of the distribution of drying floors



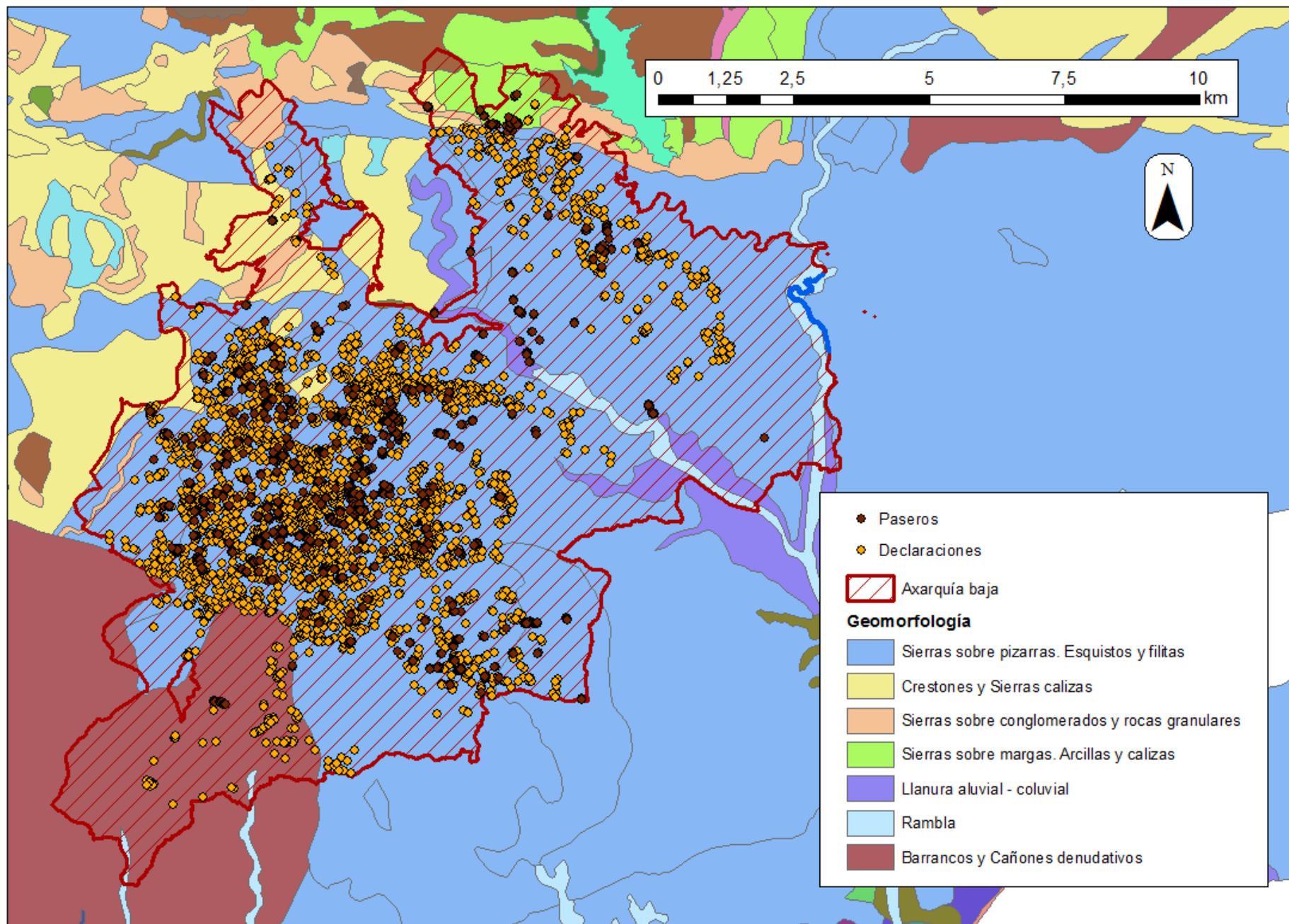
Map 12. Map of the boundaries of the GIAHS area



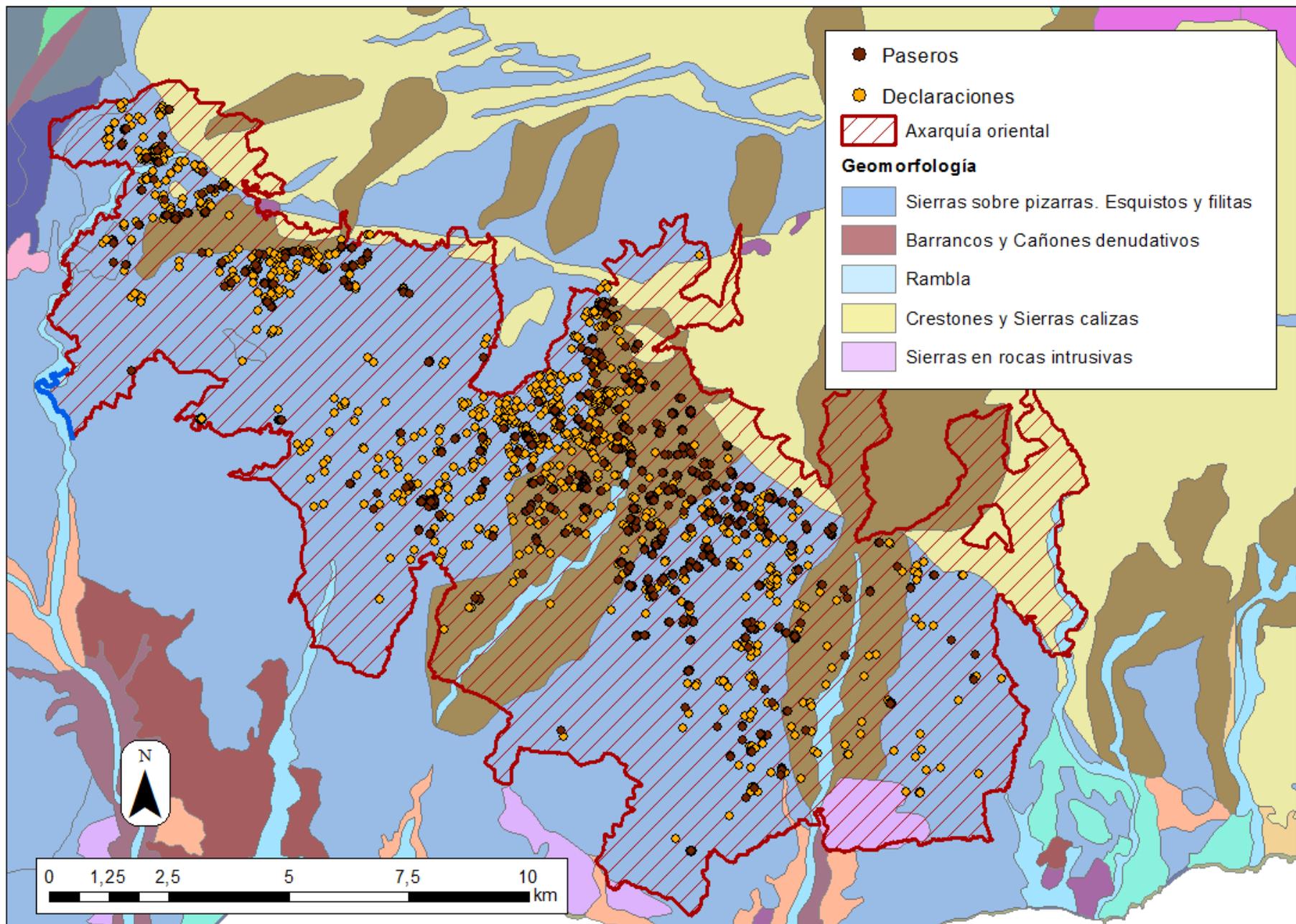
Map 13. Map of the density of drying floors in the GIAHS area



Map 14. Map of the location of both GIAHS subareas: Eastern Axarquía and Low Axarquía



Map 15. Subarea of Low Axarquía, on the lithologic map of Andalusia



Map 16. Subarea of Eastern Axarquía, on the lithologic map of Andalusia

3 Routes of La Axarquía

a Mudéjar route

The Arab roots of La Axarquía are present inside these five small villages where it is possible to admire minarets, arcades and other elements that give a charming spell to this route.

The route comprises five villages, which still conserve the most prominent examples of Mudéjar architecture in the area. Arenas, Archez, Salares, Sedella and Canillas de Aceituno are villages designed with an authentic Mudéjar style, that is the special feature of this route.

Among these features, some stand out: the Minaret and the bridge of Salares, the Árchez Tower in Daimalos (Arenas) and the village of Sedella. Such is the importance of the Mudéjar culture in the area that the village of Salares organises an Arabic Al-Andalus festival in September.



Fig. 69. Mudéjar route

b Sun and Avocado route

The Sun is one of the main attractions of this route, as it is present during the whole trip through the beautiful villages, long coasts and inland fertile fields.



Fig. 70. Avocado route Axarquía.

The route extends from the beaches of Rincón de la Victoria, known as the gateway to La Axarquía, to the subtropical crop fields in Benamargosa, along 75 kilometres. The villages that make up the route are Rincón de la Victoria, Macharaviaya, Vélez-Málaga, Benamocarra, Iznate and Benamargosa.

Subtropical fruits are, together with the magnificent Sun that can be enjoyed on its coastal areas, the common element of a route that makes an impact on everyone who visits it. Mangoes, papayas, cherimoyas and, above all, avocados, coexist in perfect harmony with the traditional crops of La

c Sun and Wine route

In the hills full of vines, there are traditional white farmhouses where the Muscatel wine, famous since Roman times, is produced.

This route combines the best of the inland and coastal areas, thus combining the peace provided by rural areas and tourist attractions.

The proximity to the beach will have an influence in the qualities of the Sun and Wine route thus forming a duality manifested in all its cultural aspects.



Fig. 71. Route of the sun and wine

Despite the years passed by and the progresses made concerning technology, the wine-making process is still artisanal: grapes are sun dried in the traditional drying floors and after that, the grapes musts selected are stored in barrels. Although wine production is a characteristic activity of the whole La Axarquía and especially of this route, it particularly stands out in the village of Cómpeta, which celebrates the famous Night of the Wine.

In the area, it is worth noting the presence of the only factory of cane honey existing in Europe.

d Olive oil and Hills route

This route consists of the villages of Riogordo, Colmenar, Alfarnate, Alfarnatejo, Periana, Alcaucín, and la Viñuela, which offer a unique landscape of hills and mountains, dominated by the green colour of olive groves and pastures. The access is easy from the A-45 motorway or, if already in La Axarquía, using road A-356.



Fig. 72. Olive oil and hills route

The remains of large millstones and huge pots found along the route, attest the antiquity of the olive-growing tradition that plays a major role in the Mediterranean cuisine. Olive trees of "Verdial" and "Nevadillo" varieties are the origin of an oil characterized by having a fruity, very sweet and pleasant taste on the palate.

In order to enjoy all the olive oil-related culture, this route offers the possibility of attending the olive harvest that begins in December.

Gastronomy is one of the strengths of this route. Together with olive oil,

travellers can taste the cold and dry meat and cheese produced in the area.

4 Species of floristic interest

Endangered species	<i>Asplenium petrarchae</i> ssp.bivalens	Iberian-Moroccan endemic species found in calcareous rocks of humid environments of the Montes de Málaga.a.
	<i>Buxus balearica</i>	Baetic endemic species that can be found on the lower parts of Sierra de Almirajara, one of the few Andalusian municipalities where it exists.
	<i>Cneorum tricoccum</i>	Baetic endemic species that can be found on the lower parts of Sierra de Almirajara, one of the few Andalusian municipalities where it exists.
	<i>Cytisus malacitanus</i> ssp.moleroi	Málaga endemic species of holm oaks that exists in the thickets of the Corredor de Colmenar and Montes de Málaga.
	<i>Hieracium texedense</i>	Endemic species of bushes of the supramediterranean area that can be found in shade areas of Sierra de Tejeda
	<i>Limonium malacitanum</i>	Málaga endemic species that can be found at sea cliffs (Maro-Torroxo).
	<i>Rosmarinus tomentosus</i>	Strange Baetic endemic species that can be found at the cliffs of Maro and river Chillar
	<i>Rothmaleria granatensis</i>	Baetic-Granada endemic species found in dolomitic sand, which reaches the Sierra de Almirajara
	<i>Sarcocapnos crassifolia</i> ssp.speciosa	Baetic-Granada endemic species found in limestone that reaches the Sierra de Almirajara.
	<i>Taxus baccata</i>	Tertiary relict of high Mediterranean mountains, being these mountains located in the most southern village. It is currently in a precarious condition.
Vulnerable species	<i>Acer monspessulanus</i>	European-Moroccan endemic species that is scarce in Tejeda-Almirajara and most abundant in Dorsal Betica.
	<i>Acer opalus granatense</i>	Iberian-northafrican endemic species found in basic soils.
	<i>Amelanchier ovalis</i> ssp.ovalis	European-Moroccan endemic species that is scarce in shade areas of Tejeda-Almirajara
	<i>Anthyllis plumosa</i>	Málaga-Almirajar endemic species of thyme found in gulleys and kakiritas.
	<i>Arenaria delaguardiae</i>	Málaga-Almirajar endemic species found in arid areas and slopes of dolomitic marbles
	<i>Arenaria racemosa</i>	Tejeda-Almirajar endemic species found in stony and sandy slopes of kakiritic marble.
	<i>Celtis australis</i>	Endemic species of circunmediterranean areas found in fresh and sandy soils that can be found in Sierra de Tejeda and planted in some orchards.
	<i>Cosentinia vellea</i> ssp.bivalens	Andalusian endemic species found in calcareous rocks of warm environments in Sierras de Tejeda and Almirajara.
	<i>Eryngium grosii</i>	Magnesium soil endemic species that only exists in Sierra Almirajara, where it colonises slopes and gulleys, as well as roads with saccharoidal sands
	<i>Galium viridiflorum</i>	Ronda, Málaga and Almirajar endemic species that can be found on the edges of streams on dolomitic soils.
	<i>Laurus nobilis</i>	Endemic species of coastal Atlantic and Mediterranean European areas, very rare in Andalusia, with some specimens in the massif of Vélez.
	<i>Maytenus senegalensis</i> ssp.europea	Baetic-Rif endemic species that can be found on the coast of the calcareous crags of our the district in just a few Andalusian municipalities
	<i>Moehringia intricata</i> ssp.tejedensis	Baetic-Rif endemic species. It can be found in cracks of vertical cliffs above 1,600 m.
	<i>Pinguicula vallisnerifolia</i>	Baetic endemic species that can be found on oozing moist soils

	<i>Platycapnos tenuiloba</i> ssp. <i>paralellus</i>	Ronda and Málaga-Almijar endemic species that can be found in gulleys and screes.
	<i>Prunus mahaleb</i>	European-Moroccan endemic species that can be found in fresh and humid places, represented in Eastern Andalusia, in places like the massif of Vélez.
	<i>Pseudoscabiosa grosii</i>	Málaga-Almijar and Rif endemic species that can be found in cracks of dolomitic marbles.
	<i>Quercus pyrenaica</i>	Although it can not be easily found in the province of Málaga, it finds conditions for its development in the shade of this hill range.
	<i>Saxifraga biternata</i>	Baetic endemic species found in calcareous rocks of Dorsal Bética (Torcalense)
	<i>Sorbus aria</i>	European-Moroccan endemic species of leafy deciduous forests, that can be found in the shady side of Sierras de Tejada and Almijara.
Other vascular species of floristic interest	<i>Andryala agardhii</i>	Baetic-Rif endemic species that can be found in gulleys and rocky areas of Sierras Tejada and Sierra de las Nieves, above 1,900 m.
	<i>Anthyllis tejedensis</i>	Baetic-Northafrican endemic species that can be found in gulleys and slopes of dolomitic marbles and sometimes in cracks.
	<i>Aquilegia vulgaris</i> ssp. <i>nevadensis</i>	Baetic endemic species that can be found in moist soils, on the edge of streams.
	<i>Arenaria armerina</i> ssp. <i>caesia</i>	Málaga-Almijar endemic species that can be found in gulleys and dolomitic slopes
	<i>Calicotome intermedia</i>	Rare thermophilous species which can be found in the Andalusia coastal hills of La Axarquía, the only place of Andalusia where it exists.
	<i>Centaurea bombycina</i>	Endemic species of Tejada and Almijara that can be found on stony and sandy terrain of dolomitic origin.
	<i>Centaurea haenseleri</i> ssp. <i>epapposa</i>	Very rare endemic subspecies that can be found in dolomitic sandy slopes of Sierra de Tejada.
	<i>Centaureum linariifolium</i> v. <i>pulverulentum</i>	Variety of Sierras de Tejada and Almijara, where it colonises slopes and dolomite screes.
	<i>Dianthus anticarius</i>	Baetic endemic species found in limestone crags in Dorsal Bética (Torcalense)
	<i>Echinopartium boissieri</i>	Baetic-Extremadura endemic species found in basic substrates
	<i>Fumana hispida</i>	Rare species, which is found only in stony tables of Sierra de Jayena (Tejada and Almijara Natural Park)
	<i>Genista lobelli longipes</i>	Baetic-Murcia endemic pulvinus species of the oromediterranean area
	<i>Genista ramosissima</i>	Murcia-Almeria species that reaches Sierra de Tejada and Almijara in thickets of Mesomediterranean oak groves
	<i>Genista scorpius</i>	Rare species that can be found in calcareous-dolomitic foothills of the lands of Alhama (Tejada and Almijara Natural Park)
	<i>Gymnocarpium robertianum</i>	Rare gulleys species as it can be only found in the southern deciduous forests of maples and rowans of Sierra de Tejada and Almijara.
	<i>Helianthemum viscidulum</i>	Widely distributed Baetic endemic species that can be found on slopes and dolomitic rocks.
	<i>Hippocrepis rupestris</i>	Baetic endemic species found in calcareous rocks with cracks
	<i>Iberis grossi</i>	Málaga-Almijar endemic species which lives in cracks of rocks and sandy and stony slopes.
	<i>Jasione montana</i>	Baetic endemic species that forms grassland on sandy soils of dolomitic origin.
	<i>Juniperus communis</i> ssp. <i>hemisphaerica</i>	Circummediterranean rare species, usually found on mountain bushes, and basophils. It is preferably found on the Oromediterranean areas.
<i>Juniperus sabina</i>	Rare species that only appears on rocky parts of the steep slopes	

	of oromediterranean areas of the Sierra de Tejada.
<i>Lavandula lanata</i>	Basophil Baetic endemic species.
<i>Linaria amoi</i>	Málaga-Almijar endemic species found in rocky outcrops, slopes and dolomitic sands.
<i>Linaria anticaria</i>	Baetic endemic species found in calcareous rocky outcrops of Dorsal Bética (Torcalense)
<i>Linaria saturejoides</i>	Baetic endemic species of dolomitic sandy soils.
<i>Linum suffruticosum</i> <i>v.tejedensis</i>	Endemic variety of Sierras de Tejada and Almijara, that forms a part of the bushes that can be found there.
<i>Ononis aragonensis</i>	Baetic-Rif endemic species of deep and fresh soil
<i>Pinguicula dertosensis</i>	Baetic endemic species of oozing slopes of Sierra de Tejada
<i>Pinus nigra salzmanii</i>	Rare species forming small populations in dolomitic protosoils of steep slopes of oromediterranean areas of Tejada and Almijara.
<i>Reseda paui</i> ssp. <i>almijarensis</i>	Endemic species of dolomitic marbles of the Sierras de Tejada and Almijara. It can be found in rocks and slopes of kakiritic marble.
<i>Seseli vayredanum</i>	Ronda and Málaga-Almijar endemic species who lives in cracks of limestone cliffs.
<i>Silene boryi tejedensis</i>	Baetic-Rif endemic species rare in the province. It can be found in screes and walls above 1,500 m.
<i>Teucrium fragile</i>	Baetic endemic species inhabiting cracks of dolomitic rocks
<i>Teucrium luteum</i> ssp. <i>montanum</i>	Endemic species of the South of the Iberian Peninsula found on basic degraded soils.
<i>Teucrium webbium</i>	Endemic species of the South found on the Iberian Peninsula of the dolomitic sand fields of Jayena (Tejada and Almijara Natural Park)
<i>Thymelaea tartonraira</i> ssp. <i>angustifolia</i>	Baetic-Rif endemic species found on dolomitic sandy soils
<i>Thymus granatensis</i> ssp. <i>micranthus</i>	Very rare species, not cited in Granada, that can be found in sandy dolomite lithosoils.
<i>Thymus longiflorus</i>	Baetic endemic species found on dolomitic eroded soils
<i>Ulex rivasgodayanus</i> ssp. <i>almijarensis</i> .	Endemic species of Sierras de Tejada and Almijara. It can be found in bushes on dolomitic marbles of thermomediterranean soil.

Table 9 Species of floristic interest.

5 Lexicon

Albarrada	Small wall of dry-stone which is usually placed between vines to reduce erosion
Apirena	Seedless grape.
Azadón	Hoe. It is an essential tool to dig. It consists of three parts: a shaft, a narrow or thin blade on one side and, on the opposite side, two strong hooks.
Caja de grano	A wooden box that has capacity for ten kilos of raisins removed from the bunch.
Cajas de lecho o Catite	Boxes in which bunches are placed in four or five layers. It is similar to a <i>formalete</i> (see below) but this one is four times higher.
Calle	Alley. Space between traditional drying floors in their long sides. It does not usually exceed a meter wide.
Camiones	Traditional footwear, similar to espadrilles.
Casquera	Bud that grows under the cordon (also known as "arm") which will be left as a "seed of wood" to generate the shoot that will hold bunches the following crop year.
Cepa	The word <i>cepa</i> (stock) is used to talk about the vine in the individual sense. However, <i>viña</i> (vineyard) is used when plural or collective.
Cernir	When bunches start to form, approximately mid-May.
Chamarín	Common name used in the area to refer to the European Serin (Serinus Serinus), a passerine bird species of the family of finches.
Cochura	Period of time when grapes are extended in the drying floor to sun-dry.
Coger grano o escoger grano	Removing raisins from the drying floor and keeping the soft ones on it.
Combrero o Cumbreiro	Set of canes interlaced and tied with ropes which is placed along the centre of the drying floor, leaning on the top, the bottom part and the stakes, enabling to cover the drying floors with awnings
Escobajo	The bunch after removing the grapes (leaving just the stems).
Esgranar	Removing grapes from the bunch by hand not using scissors. This task is developed when raisins are very dry and they have a low quality.
Formalete	Rectangular and little wooden box (5 cm height) used to remove the raisins from the bunch.
Fragar o Apañar	Tilling the surrounding of the vine stock, removing soil, cutting rootstocks and putting some soil back to protect the vine stock.
Gajo	A piece of bunch detached from the large one or a very small bunch.
Geñar	It is said when vines do not bloom properly.
Grano	Raisins already removed from the bunch.
Hornada	All the grapes extended in the drying floor to sun-dry. Depending on production and location, there may be two or three batches in the same drying floor.
Lecho	Area of the surface of the drying floor where grapes are extended. It is divided into two longitudinal symmetrical parts, called <i>patas</i> (legs).
Levantar	Picking raisins up from the drying floors once the time needed to sun-dry them is finished. This task is developed from the bottom to the upper part.
Mamón o mamones	Ungrafted vine stocks.
Marquilla	Peduncle. Part of stem left in the bunch when it is harvested.
Mástil	Trunk of the vine stock.

Menchón	Agricultural plot abandoned where there are only some natural herbaceous vegetation and some scrubs and shrubs.
Montao	Bud that grows in the upper part of a cordon (also know as “arm”). It can result in shoots with bunches or it can be used just to shade them.
Mostear o Molestar	Grape poorly handled and over-touched during harvesting resulting in the removal of part of whitish cover which the grape has attached to the skin.
Palos de pasa	When the bunch is dry and raisins are removed.
Pámpana	The leave of the vine.
Parra	Rootstocks that are grown lifted to shade.
Pelgares	They are bad bunches of grapes or bunches with almost no grapes.
Picar pasas	Removing raisins from the bunch using special scissors.
Pinganillo o Pingano	Each of the stakes ended up in a fork shape on which the <i>combrero</i> is placed. They divide the two parts of the drying floor.
Plantá	Extending the grapes carefully on the floor of the drying floors. Farmers start from the bottom to the top and with the peduncles of bunches heading to the bottom.
Postura	Word used in the area to refer to new vines.
Racimos de güertura	Bunches that due to being weaker, of poorer quality, they dry before and they must be removed from the traditional drying floors in advance.
Rebuscos	Short bunches that vines produce after tipping.
Saca	Vine training that cuts above the bud <i>casquera</i> which will be the next cordon (arm).
Sarmiento	Branch growing from an arm. Just one bud is allowed to grow, the <i>casquera</i> , which will be called <i>pulgar</i> once grown. The following year, buds will bloom from this branch.
Sernillar o Sierna	Task of pruning the dry branches of the previous year, leaving <i>pulgares</i> with their buds.
Tapao	Branch of a rootstock grown pressed by a stone that forces it to grow downwards. It is used in June to protect the stock and prevent grapes from being damaged by the Sun.
Tresbolillo	Positioning plants in parallel rows, so that each plant of a row is opposite a gap (between two plants) of the row in front.
Verdeo	Harvesting those grapes produced for table grapes.
Virote	An elongated stem.
Zarcillo o tijereta	Tendrill: a long, slender stem that serves the vine to cling to other stems or near objects.

Table 10 Lexicon associated with the production of raisins in Málaga.

6 Examples of literary texts

a Poet Salvador Rueda Santos^{xxxvi}:

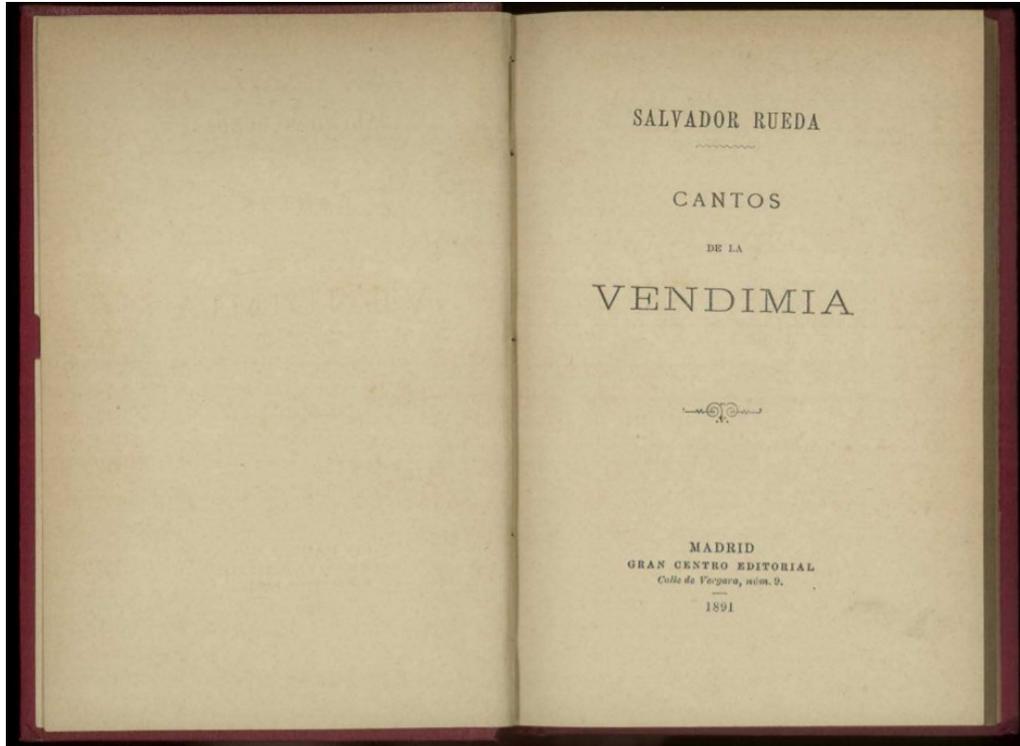


Fig. 73. Cover of a poems book by Salvador Rueda

El racimo de uvas

En un cairel de pámpanos asido,
vedlo colgando del parral ardiente;
tras él se eleva el sol resplandeciente,
y a su trasluz colúmpiase encendido.

De virginales átomos vestido,
vierte salud en el templado ambiente;
sus uvas son como collar de oriente
a un rojo tallo de coral prendido.

Cuando se corta del racimo el peso,
el tallo cruje como el son de un beso
que conmueve la sangre acelerada.

Y al temblor de las pámpanas lascivas,
salta el rocío en gotas fugitivas,
crujiendo como alegre carcajada.

(This poem beautifully describes a bunch of grapes hanging from the vine, how it is seen in the countryside with the effect of the sunlight and how it sounds and how the farmer feels when he/she cuts its stem.)

La vendimia (fragmento)

Las cuadrillas, cargadas con los fruteros,
en hileras caminan a los lagares,
y dejan como estelas por los senderos
los andaluces dejos de sus cantares.

Por sus rostros curtidos baja y rutila
el manantial formado por los sudores:
esos, que el cuerpo humano forma y destila,
diamantes coronados de resplandores.

Van hacia los cortijos que el campo alfombra;
allí están las pendientes de los paseros,
y el parral a la puerta, prestando sombra
a llenadores, hembras y cortijeros.

(This is a fragment of a poem that tells the harvesting process. It is focused on farmers and how they work hard.)

La fiesta (fragmento)

¿Quiénes son los que alegres
forman la fiesta clásica?
¿Griegos? No, campesinos
de la graciosa Málaga

Se dio ya en los paseros
de mano a la jornada,
y el baile de la tierra
despliega luz y gracia.

(This is a fragment of a poem that describes how farmers start partying once they have finished their work).

La caja de pasas (fragmento)

Rimando los racimos de almibaradas pasas,
están los llenadores junto a las verdes cañas;
el lecho es una estrofa que la tijera labra
como una sabia lira de la armonía plástica.

En él, unos renglones a otros renglones calcan;
un hemistiquio dulce a otro hemistiquio iguala;
informa una cadencia los lechos de la caja,
y en ella son iguales las rítmicas estancias.

(This is a fragment of a poem that describes a wooden box full of raisins).

El sacorio II (fragmento)

Con fiestas en la explanada
ánimanse los lagares,
cuando el tajo en la vendimia

deja cortado la tarde.
En torno de los paseros,
la gente empieza a alegrarse
con el rumor de la copla
que fue despertando el aire.
Sabrosos cuentos se escuchan,
y sentencias y refranes,
y donde expira una risa,
un chiste palpita y nace.
Al dulce olor de las uvas
se une el grato del vinagre,
y al de fuego de la tierra
el de la fronda sonante.

(This is a fragment of a poem that describes the festivals and parties that are held during harvesting. It shows how the people living in the villages join farmers in the celebrations and how the whole village enjoy and celebrate their festivities around this product and activity).

b Writer Arturo Reyes:

...

“Y Bernardo se dirigió hacia el pasero, y poco después conducía al llano, en los zazos de caña hechos por él, los mejores racimos de la escasísima cosecha.

Ya de vuelta, en el llano, colocó el fruto sobre algunos costales vacíos, sacó las cajas que había de llenar, y entregose al trabajo con verdadero ahínco.

Sentado en tierra, con las cajas delante de sí, y después de formado el cordón, colocando las pasas por parejas en el fondo de la caja, cogió el primer racimo con la mano izquierda, lo puso en alto, miróle como hombre inteligente, y con femenil delicadeza, y sin que—como los maestros de profesión disponen, —sus dedos tocasen al grano, dio comienzo a la entretenida labor.

Las tijeras eran manejadas por él con admirable soltura; el grano indigno de figurar en el racimo, la pobre gandinga, sufría la necesaria amputación, cayendo en otra caja de más humildes pretensiones.

Ya estaban los zazos cubiertos de racimos que parecían contrahechos, sin que la aterciopelada película del grano hubiera perdido un átomo del polvo que la cubre y avalora, cuando Araceli apareció en la puerta del lagar, y dirigiose rápida con los brazos abiertos hacia el mozo”.

...

Fragment of the novel “El lagar de La Viñuela” (The farmhouse of La Viñuela)

(This is a fragment of a novel that describes grapes harvesting.)

7 Cooperation Protocol to showcase the Muscatel products in cuisine. Grapes, raisins and wine: innovation for a new cuisine

Protocol signed by Asociación Moscatel (Muscatel Association), the Union of raisins cooperatives of La Axarquía (UCOPAXA), Bodega Antonio Muñoz Cabrera, Dimobe (Winery) and Natividad Díaz Mercado, MEDCHEF award for the Best Mediterranean Cook.

Almáchar, October 2017.

PREAMBLE

The Asociación Moscatel aims to defend Muscatel vineyards and the production of raisins and wine, thus improving the local economy and protecting the life style related to grapes growing. The objective of this Association is to promote tourism in order to boost the local economy of Almáchar and its surroundings and, as a result, showcase the value of Muscatel vineyards and take advantage of the many tourist attractions that may arise from our main economy.

The Union of raisins cooperatives of La Axarquía (UCOPAXA), is a company dedicated to the production and marketing of all products produced in Muscatel vineyards. Its aim is to market these products with the greatest possible scope and activate the local economy of the villages of the area of La Axarquía thanks to tourism, making the most of the many attractions that our culture may have, our gastronomic wealth and the impact that Muscatel grapes growing have on both of them.

Bodega Antonio Muñoz Cabrera, Dimobe, is a family winery founded in 1927 with a wide range of sweet Muscatel wines. Since its foundation, the winery has been improved so as to apply the latest innovations in the analysis of wines and packaging, both developed with the most efficient machines on the market in order to produce their wines the utmost care. In addition, Dimobe has participated in pairings to match their products with the rich cuisine of our province.

Natividad Díaz Mercado, MEDCHEF award for the Best Mediterranean Cook. Her first words after receiving the award were devoted to call for the products of the Mediterranean diet. "We must continue to showcase the seasonal Mediterranean products produced in our orchards of the area of La Axarquía in Málaga". Natividad was also awarded with the first prize in the Cooking Competition called, Tradition and Innovation, organised by the Institute of Mediterranean food of the Regional Ministry of Agriculture, Fisheries and Rural Development of Andalusia. Throughout her entire professional career, she has always defended that cooking must be 'attached to the ground', to its most genuine products like raisins or wine.

APPEAR

Mr. José Manuel Díaz Santana, president of Asociación Moscatel, for the participation in the tourism development of Almáchar and for the defense of Muscatel vineyards and the production of raisins and wine.

Salvador Muñoz, General Manager of the Union of raisins cooperatives of La Axarquía (UCOPAXA).

Mr. Juan Muñoz Anaya, person responsible for Bodega Antonio Muñoz Cabrera, Dimobe.

Mrs. Natividad Mercado Díaz, MEDCHEF award

The parties have the legal capacity to agree on obligations binding the institutions they represent, so they sign the present Protocolo and they,

STATE

that the parties are interested in showcasing Muscatel products - grapes, raisins and wine - to safeguard the gastronomic heritage linked to them so as to promote innovation for a new cuisine in La Axarquía.

We agree that there are rich and diverse cultural and historical experiences that could be the base of this new cuisine of La Axarquía to develop, enjoy and market the tasty fruits of this fantastic area.

The main objectives of this cooperation are the dissemination of the quality of the Muscatel agri-food products, as this type of grapes is a genuine crop rooted in the memory of Málaga and especially of La Axarquía. Moreover, this cooperation also aims to showcase its nature as part of the Mediterranean diet, recognized as Intangible Cultural Heritage by UNESCO.

PROVISIONS

First.- The Asociación Moscatel has agreed to appoint each year a recognised person as Ambassador of Muscatel grapes in order to safeguard the gastronomic and cultural heritage linked to raisins and wine. This will be a recognition to his/her worth and this selection will also be a formula that will benefit Muscatel products due to the worth, interest or influence of the people chosen. This appointment will also raise the awareness on raisins and wines and it will be very important for our sector. For this first time, the person chosen is Mrs. Natividad Mercado Díaz, MEDCHEF award. The Asociación Moscatel will appoint Natividad Mercado Díaz as Ambassador of Muscatel grapes during our Muscatel Market. Likewise, the creations of our Ambassador will be presented and a SHOW COOKING using raisins and Muscatel wines will be held by the prestigious chefs Mr. Sergio Garrido, Mr. Sebastián Guerrero and Mr. Damián Ramos.

Second.- The Union of raisins cooperatives of La Axarquía (UCOPAXA) shares the objectives of the Asociación Moscatel and its Market with regards to the ways to handle, cook, prepare, taste and market the tasty fruits of this land. To do this, we are going to work together on several issues. We will have presence to offer our products, we will participate in a wine tasting with our finest wines and we will provide our raisins and wines for the preparation of the presentations made by our Ambassador of Muscatel grapes during her SHOW COOKING.

Third.- Bodega Antonio Muñoz Cabrera, Dimobe, has collaborated with the Muscatel Market from the very first moment. In this edition, we will participate again with a wine tasting and we

will provide our products for the presentations of our Ambassador of Muscatel grapes and the SHOW COOKING.

Fourth. - Natividad Díaz Mercado, MEDCHEF award for the Best Mediterranean Cook, declares her commitment to showcase the seasonal Mediterranean products produced in our orchards of area of La Axarquía in Málaga. Likewise, she accepts her appointment as Ambassador of Muscatel grapes, with the commitment to develop a series of milestones over the next year among which are: participating in the Muscatel Market to be held on November 12, presenting a series of innovative creations such as raisins nougat, raisins gummies, etc. and organizing and running a SHOW COOKING with dishes made with Muscatel products. Once the present document has been read and, as a signal of the agreement on the foregoing, the parties sign it and subscribe it in quadruplicate but with a single effect in the city and date in the header.

Signed. Mr. José Manuel Díaz Santana

Asociación Moscatel

Signed. Mr. Salvador Muñoz

General Manager UCOPAXA

Signed. Mr. Juan Muñoz Anaya

Bodega Dimobe

Signed. Mrs. Natividad Díaz Mercado

MEDCHEF award

Original signed text:

Leído el presente documento y en prueba de plena señal de conformidad con
cuento antecede, las partes lo firman y suscriben por cuadruplicado y a un solo
efecto en la ciudad y fecha del encabezamiento.



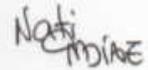
Fd. D. José Manuel Díaz Santana,
Asociación MOSCATEL



Fd. D. Salvador Muñoz.,
Gerente UCOPAXA



Fd. D. Juan Muñoz Anaya
Bodega , Dimobe



Fd. D.ª Natividad Díaz Mercado
Premio MEDCHEF



8 Other food festivals

In addition to the specific festivals related to vine growing and raisins production already explained in previous sections, there are many others related to agricultural products, such as the day of the black pudding (*morcilla*) in Canillas de Aceituno, the day of loquats in Sayalonga, the chestnut festival in Alcaucin, the feast of fried breadcrumbs (*migas*) in Torrox, etc. The most important festivals related to vine growing are explained below.

a The grapes must and cold meat day in Colmenar

On the second Sunday of December, after grapes have been harvested and pigs have been traditionally slaughtered, the village organises this festival in which wine, cold meat and other products produced in the area, such as olive oil, raisins, goat cheese, etc. are distributed. The festival is enlivened with the performances of *Pandas de Verdiales* (groups that play a kind of flamenco music) and a contest is held to award the best cold meat of the village.

b Cómpeeta's Night of the wine

Cómpeeta celebrates, on August 15, one of its most important festivals, being this one the most famous and the one that most characterizes the village. This festival pays tribute to the patron saint of the town, Nuestra Señora de la Asunción, and in its origin, there was a farewell to the farmers departing the next day to start harvesting grapes. In 1973, a neighbour invited to all the people living in Cómpeeta to all the wine they could drink that night in the village and this was the origin of this event that is celebrated every year and that has earned even international reputation.

The festival starts in the morning when grapes are trod. The neighbours from Cómpeeta dress in the same way traditional grapes harvesters did and they tread the grapes while a tasting of the Muscatel wine produced in the area is offered.

A meal based on fried breadcrumbs, salad and grapes precedes a series of cultural performances, such as folklore and flamenco, poetry, artist and writing performances.

9 Seminar on "Vine and wine landscapes" organized by the foundation of the Centre for Andalusian studies. Manifesto of support to the GIAHS proposal.

Seville, 26 October 2017

The Andalusian Public Foundation "Centre for Andalusian studies" is a non-profit foundation of the Andalusian public sector that falls under the Regional Ministry of Presidency, Local Administration and Democratic Memory of Andalusia. It aims to promote studies and scientific research which contribute to raise the awareness and knowledge on Andalusia and to disseminate such knowledge.

And, on its behalf, Mrs. Mercedes De Pablos Candón, acting as Director Manager of the Foundation VAT number G-911 220 69 and headquarters in Seville, Bailén street 50, which was incorporated by notarised deed signed in Seville by Mr. Rafael Lena Fernandez on 26 March, 2001, and registered in the registry section number nine on "Foundations of the Public Sector of the Autonomous Community of Andalusia", registered on 4 June, 2001, with number SE/774

DECLARES

- I. That the Foundation has organized the 6th Seminar on industrial landscapes of Andalusia on 20 and 21 October 2017. This year, it has been focused on "Vine and wine landscapes" and it has been organized by the Foundation "Centre for Andalusian studies" in Málaga and Moclinejo.
- II. The place chosen for the case study for this sixth edition has been the vines landscape of La Axarquía given the uniqueness and exceptional nature of this production landscape proposed as the subject matter of the three lines of work of the seminar: 1. History and heritage; 2. Territory and management. 3. Perception and landscape.
- III. The Scientific Coordinators of the seminar, experts and multidisciplinary attendees have informed this Foundation about the findings and conclusions of the above-mentioned Seminar.
- IV. This is why, having regard to said conclusions, this Foundation hereby endorses the proposal to declare the raisins production system developed in La Axarquía as GIAHS (Globally Important Agricultural Heritage System) promoted by the Food and Agriculture Organization of the United Nations (FAO) given the physical, morphological, productive and cultural features described in the conclusions statement issued by the coordinators of the above-mentioned Seminar.
- V. Moreover, we would like to state that we hope that the good practices developed by the inhabitants of the area will enable the maintenance of the agricultural practices and cultural values that make up this extraordinary landscape, where experience and tradition are combined in a dynamic and innovative environment characterised by sustainability.

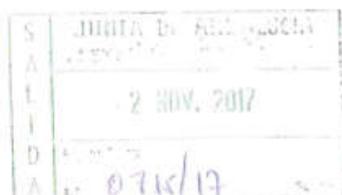
Signed by the coordinators of the 6th Seminar on industrial landscapes of Andalusia.

Signed by the Andalusian Public Foundation "Centre for Andalusian studies".

Original signed text:



Centro de Estudios Andaluces
CONSEJERÍA DE LA PRESIDENCIA,
ADMINISTRACIÓN LOCAL Y MEMORIA DEMOCRÁTICA



D. José Manuel Moreno Ferreiro
Comité Técnico SIPAM
Secretario General
Consejo Regulador DOP Málaga
Plaza de los Viñeros, 1 29008 Málaga

Sevilla, a 26 de octubre de 2017

La Fundación Pública Andaluza Centro de Estudios Andaluces es una fundación del sector público andaluz, sin ánimo de lucro, adscrita a la Consejería de la Presidencia, Administración Local y Memoria Democrática de la Junta de Andalucía, tiene por objeto fundacional el fomento de los estudios e investigaciones científicas que contribuyan a un mejor conocimiento de Andalucía y a la difusión de dicho conocimiento.

Y, en su nombre y representación, D^ª. Mercedes de Pablos Candón, actuando en calidad de Directora Gerente de la Fundación con C.I.F. G-91122069 y sede en Sevilla, calle Bailén, 50, que fue constituida ante el Notario de Sevilla D. Rafael Leña Fernández, el 26 de Marzo de 2001 e inscrita en la Sección Registral Novena "Fundaciones del Sector Público de la Comunidad Autónoma de Andalucía", registrada el 04-06-2001, con el número SE/774,

MANIFIESTA:

- I. Que la Fundación ha organizado los 20 y 21 de octubre de 2017 el VI Seminario de Paisajes Industriales de Andalucía, dedicado en esta edición a los "Paisajes de la vid y del vino" y organizado por la fundación del Centro de Estudios Andaluces, celebrado en Málaga y Moclinejo.
- II. El lugar elegido para el estudio de caso de esta edición ha sido el paisaje vitivinícola de la Axarquía dados los factores de singularidad y excepcionalidad de este paisaje de la producción propuesto como objeto de estudio en las tres líneas de trabajo del Seminario: 1. Historia y patrimonio; 2. Territorio y gestión; 3. Percepción y paisaje.
- III. Los Coordinadores científicos del Seminario, las aportaciones expertas y multidisciplinarias de los asistentes han trasladado a esta Fundación las conclusiones del citado Seminario.

- IV. Es por ello que esta Fundación, vistas las conclusiones y, mediante el presente escrito, avala la la Candidatura SIPAM del proceso de pasificación desarrollado en la Axarquía a la categoría de lugar SIPAM (Sistemas Importantes del Patrimonio Agrícola Mundial) promovidos por la Organización de las Naciones Unidas para la Alimentación y La Agricultura (FAO) dados los rasgos físicos, morfológicos, productivos y culturales descritos en el escrito de conclusiones emitido por parte de los Coordinadores del citado Seminario.
- V. Asimismo queriendo afirmar nuestra esperanza de que las buenas prácticas de sus habitantes puedan seguir asegurando el mantenimiento de las prácticas agrícolas y de los valores culturales que conforman este extraordinario paisaje, donde se conjugan la experiencia y la tradición en un entorno dinámico e innovador marcado por la sostenibilidad.

Por parte de los Coordinadores del VI Seminario de los Paisajes Industriales de Andalucía,



Julián Sobrino Simal
Profesor Titular de la Universidad de Sevilla y
Vicepresidente de TICCIH-España



Marina Sanz Carlos
Archivera y Vocal de TICCIH-España

Por parte de la Fundación Pública Andaluza Centro de Estudios Andaluces



Mercedes de Pablos Candón
Directora Gerente

The 6th Seminar on industrial landscapes of Andalusia, organized in Málaga and Moclinejo on 20 and 21 October 2017 by the foundation of the Centre for Andalusian studies, was focused this year on "Vine and wine landscapes".

The place chosen for the case study of this edition has been the vineyard landscape of La Axarquía given the factors of uniqueness and exceptional nature of this landscape proposed as the subject matter of the three lines of work of the Seminar: 1. History and heritage; 2. Territory and management; 3. Perception and landscape.

The Scientific coordinators of the seminar and the attendees would like to make their findings public in the form of a manifesto of support to the GIAHS proposal for the raisins production process developed in La Axarquía.

1. The historical vine-growing landscape of La Axarquía is an integrated system in which geology, history, crafts, infrastructures and society have diachronically modelled a territory in which sustainable management is the most influential feature in its management and continuity. The production units such as vineyards, farmhouses and drying floors are essential features of this landscape.
2. The harmonious integration of productive tasks into the lifestyle has led to a smart management of resources and the natural environment through a chain of values which are inseparable from the continuous vine-growing actions developed by the residents of La Axarquía, who always face the challenges of the contradiction between change and continuity.
3. We conclude that meticulous and expert care is essential to this complex system. It is transmitted from one generation to the next and applied to the different phases of the raisins producing process, from vine growing to the final product for consumption in a dynamic and evolving landscape that develops innovations to improve its procedures without relinquishing tradition.
4. During the historical evolution of this production model made up of agricultural and processing tasks, a set of great value inclusive cultural variables such as architecture, vocabulary, tooling, folklore and festivals, the interaction of roles of age, gender and social groups have been incorporated, in a symbiotic way, into the landscape where villagers live in order to form a cultural landscape of extraordinary uniqueness, representativeness and authenticity.
5. Even though the territory of La Axarquía is consistent, it is possible to distinguish different landscape subsystems that depend on the topography and the spatial planning, a fact that provides diversity and interaction in the way of using this area to produce and live. Therefore, there is a constant exchange of knowledge and practices to ensure the necessary update of tradition.
6. The landscape of La Axarquía, perceived from its exceptional and multiple observation points, has been formed by different structuring variables such as altitude, wind, slope, orientation, geology or hydrology; variables that contribute and ensure the delicate balance of this fragile miracle of La Axarquía, according to the different agricultural and property levels, what means that plots are basically small and owned by families.
7. We take this opportunity to underline the fundamental role played by the inhabitants of La Axarquía as they are guarantors of the survival of this ancient way of living and producing in the territory based on the generation of a culture and the social

appropriation of its material and immaterial values. Values that represent and characterize this landscape through the development of technical procedures that require technical knowledge that represents a true collective territorial intelligence.

8. We warn about the risks and threats that this vine-growing landscape of La Axarquía face as a result of the territorial, urban, demographic, social and technical transformations, that due to changes in the applications, may jeopardize this delicate ecosystem. To this end, its inhabitants must develop management strategies to prevent substantial alterations in their way of life and the environment in which it is developed.

In conclusion, from the Scientific Coordination of the Seminar and with the experienced and multidisciplinary contributions made by the attendees:

We endorse the Proposal of the raisins production system of La Axarquía to be declared as GIAHS (Globally Important Agricultural Heritage Systems) promoted by the United Nations Organization for Food and Agriculture (FAO) given the physical, morphological, productive and cultural features described in this report.

We hope that the good practices developed by its inhabitants will continue ensuring the maintenance of the agricultural practices and cultural values that make up this extraordinary landscape, combining the experience and tradition in a dynamic and innovative environment marked by sustainability.

In Moclinejo (Málaga), 21 of October 2017

The Coordinators of the 6th Seminar on Industrial landscapes of Andalusia

- Julián Sobrino Simal, Professor of the Department for Architectural History, Theory and Composition of the University of Seville and Vice-President of The International Committee for the Conservation of the Industrial Heritage-Spain.
- Marina Sanz Carlos, Archivist and Member of The International Committee for the Conservation of the Industrial Heritage-Spain.

Original signed text:



El VI Seminario de Paisajes Industriales de Andalucía, dedicado en esta edición a los "Paisajes de la vid y del vino" y organizado por la fundación del Centro de Estudios Andaluces se celebró en Málaga y Moclinejo los días 20 y 21 de octubre de 2017.

El lugar elegido para el estudio de caso de esta edición ha sido el paisaje vitivinícola de la Axarquía dados los factores de singularidad y excepcionalidad de este paisaje de la producción propuesto como objeto de estudio en las tres líneas de trabajo del Seminario: 1. Historia y patrimonio; 2. Territorio y gestión; 3. Percepción y paisaje.

Los Coordinadores científicos del Seminario y los asistentes quieren hacer públicas sus conclusiones en forma de manifiesto de apoyo a la Candidatura SIPAM del proceso de pasificación desarrollado en la Axarquía.

1. Que el paisaje histórico de la producción vitivinícola de la Axarquía malagueña constituye un sistema integral en el que la geología, la historia, los oficios, las infraestructuras y la sociabilidad han modelado diacrónicamente un territorio en el cual la gestión sostenible es el rasgo más influyente en su manejo y continuidad. Siendo esencial para ello las unidades de producción constituidas por el viñedo, el lagar y el pasero.
2. Que la integración armoniosa de las tareas productivas con el modo de habitar ha generado un manejo inteligente de los recursos y del medio natural mediante una cadena de valores que son indisolubles a la acción continuada de laboreo vitivinícola ejercida por los pobladores de la Axarquía, enfrentados a la dialéctica, siempre conflictiva, de cambio y permanencia.
3. Que constatamos cómo, en este sistema complejo, es esencial el cuidado minucioso y experto, transmitido generacionalmente y aplicado a las diferentes fases del proceso de pasificación, desde el cultivo en origen hasta la obtención del producto final para el consumo en un paisaje dinámico y evolutivo que sin renunciar a la tradición desarrolla innovaciones de mejora de sus procedimientos.

4. Que durante la evolución histórica de este modelo de producción constituido por tareas agrícolas y de transformación se han ido incorporando de una manera simbiótica al paisaje en el que viven sus pobladores un conjunto de variables culturales de gran valor integrador como son las arquitecturas, el vocabulario, el utillaje, el folclore y las fiestas, en la interacción de roles de edad, género y grupo social, hasta conformar un paisaje cultural de extraordinaria singularidad, representatividad y autenticidad.
5. Que en el territorio de la Axarquía, aún dentro de su unidad, se pueden distinguir diferentes subsistemas de paisaje dependientes de la topografía y la ordenación del territorio, que proporcionan diversidad e interacción en las formas de producir y habitar este espacio. De manera que se produce un intercambio constante de saberes y prácticas que aseguran la renovación necesaria a toda forma de tradición.
6. Que el paisaje de la Axarquía, percibido desde sus múltiples y excepcionales hitos de observación, ha sido conformado por diferentes variables estructurantes tales como la altitud, los vientos, la pendiente, la orientación, la geología o la hidrología, variables que, según las diferentes escalas de propiedad y explotación, de marcado carácter minifundista y familiar, contribuyen y aseguran el delicado equilibrio de este frágil milagro de la Axarquía.
7. Que aprovechamos para subrayar el papel fundamental de los pobladores de la Axarquía como garantes de la supervivencia de este ancestral modo de habitar y producir en el territorio a partir de la generación de una cultura y la apropiación social por su población de sus valores materiales e inmateriales. Valores que identifican y caracterizan a este paisaje gracias a la práctica de unos procedimientos de sabiduría técnica que constituyen una verdadera inteligencia territorial colectiva.
8. Que advertimos acerca de los riesgos y amenazas que se ciernen sobre este paisaje de la producción vitivinícola de la Axarquía como resultado de las transformaciones territoriales, urbanas, demográficas, sociales y técnicas que, incidiendo en los cambios de usos, pueden poner en peligro este delicado ecosistema. Para lo cual es necesario que sus habitantes desarrollen estrategias de gestión que impidan alteraciones sustanciales de sus formas de vida y del medio en el que se insertan.

En conclusión, desde la Coordinación Científica del Seminario y con las aportaciones expertas y multidisciplinares de los asistentes:

Avalamos la Candidatura del Sistema de la Pasificación de la Axarquía a la categoría de lugar SIPAM (Sistemas Importantes del Patrimonio Agrícola Mundial) promovidos por la Organización de las Naciones Unidas para la Alimentación y La Agricultura (FAO) dados los rasgos físicos, morfológicos, productivos y culturales descritos en este informe de apoyo.

Queriendo afirmar nuestra esperanza de que las buenas prácticas de sus habitantes puedan seguir asegurando el mantenimiento de las prácticas agrícolas y de los valores culturales que conforman este extraordinario paisaje, donde se conjugan la experiencia y la tradición en un entorno dinámico e innovador marcado por la sostenibilidad.

En Moclinejo, Málaga, a 21 de octubre de 2017

Los Coordinadores del VI Seminario de los Paisajes Industriales de Andalucía,



Fdo.: Julián Sobrino Simal, profesor titular Universidad de Sevilla y Vicepresidente de TICCIH-España.



Fdo.: Marina Sanz Carlos, Archivera y Vocal de TICCIH-España.

SEMINARIO

PAISAJES INDUSTRIALES EN ANDALUCÍA

20-21
OCTUBRE

Los paisajes de la vid y el vino

Colegio Oficial de Arquitectos de Málaga
C/ Palmeras del Limonar, 31. Málaga

Entrada libre previa inscripción: www.centrodeestudiosandaluces.es



Organiza



Centro de Estudios Andaluces
CONSEJERÍA DE LA PRESIDENCIA,
ADMINISTRACIÓN LOCAL Y MEMORIA DEMOCRÁTICA

Colabora



10 Other building elements

a The farmhouse (*lagar*)

Traditional farmhouses are made up of masonry walls arranged in two rectangular elongated spaces and two cross walls to brace the structure. In cross direction, it was usual to place a stable with a manger whose length coincides with the sum of the width of the two rectangular elongated spaces of the farmhouse. The complex is completed with a *chambao*⁶⁹ at the main entrance to meet the need of space and ventilation for the tasks that start in the hot summer.

Other elements that the farmhouse could have are an oven for making bread and pens for pigs or hens (although sometimes everything related to animals was located in a single room). All these building elements are very common although not all of them can be found in a single farmhouse.

In the core of this house-warehouse, in the first rectangular elongated space, there is usually a great space for the kitchen, big ceramic jars for water, a small niche with shelves, a dining room and a working area. At one end of this space, there is usually a bedroom separated from the working area (at first there were curtains and, later, a partition wall).

The second rectangular elongated space, communicated with the first space by means of a door, has been usually used as a massive bedroom and warehouse, without a clear separation between spaces. Here there were mattresses all over, boxes of wood, *formaletes* (wooden trays that are placed on the lap to put the raisins once they are removed from the bunch), sieves, wattle (a lightweight material made by weaving thin branches), tools of tillage, etc, although it is common to find a space – a room called in Spanish *pajareta* or *camareta* - where the tools that are not being used at that moment of the year are stored. Although people do not live all the year in the farmhouse, it is used during the entire production cycle so, in winter, the tools used for vine training or harvesting olives are at hand while the tools for producing raisins are stored in a small room. However, in the summer, this situation is reversed.



Fig. 74. Area annexed to the farmhouse.
Picture by María Ríos.

The two rectangular elongated spaces of the farmhouse are always illuminated by splayed windows (there are usually two in the main façade). The exterior porch is an essential area for work due to the need of space and ventilation. It is usually covered with a wood and canes structure and paved with clay tiles or stone slabs. There are also blocks attached to the wall of the façade that are used as seats and as a place to leave tools or ceramic jars with water.

⁶⁹ Porch that shades.

b Materials

The materials used in the rural architecture of farmhouses and annex infrastructures have always been those ones than can be found in the area: stone, wood, ceramics, clay and lime. The walls are made of stones well fixed with mortar made up of sand from the river, slightly clayey mud and lime. Larger non-carved stones have been used in the corners and buildings' foundations are just a little bit wider than the wall.

Wood and other plants have been used in elements subjected to bending, such as the slabs and sloping beams setted in the walls, covering the space between beams with tables or canes. They are also used in the porch, lintels and windows, doors and shelves.

The ceramic materials used are Arab roof tiles (30 cm x 30 cm square tiles) and 4 cm thick solid bricks. The roof tiles are used on the cover and floor tiles are used both in the interior and outdoor floors, as well as on the top of stone benches and window sills. Bricks are used in the construction of fireplaces, in repair works, internal partition walls, windows and doors frames, and in the front steps.

The main binding material used was mud, since obtaining lime has not always been easy nor cheap. The result was a poor mortar that has been easily replaced with the use of cement.

The presence of metal in farmhouses is rare as it only appears in the window bars and in the assembly parts of carpentry elements.

The modernization in the use of materials has facilitated the work of bricklayers and has allowed the structural improvement of buildings although their essence has not been changed. Many materials are still reused, thus maintaining the eco-friendly spirit and saving money.

c Farmhouse annexes

These buildings are almost exclusively devoted to keep animals, the ovens to make bread or those for raisins.

Concerning the buildings dedicated to keep animals, the stable was an important room as it was used to accommodate the mule - it was rarely a horse - given that almost all families used pack animals for their tasks. This building is usually attached to the farmhouse and is built with similar materials, although it has not got pavement nor coating.

Pens for breeding pigs, chickens or rabbits are, currently, less frequent as not all families can afford them. However, there are many examples of these stone structures that were built at some distance from the farmhouse and at a lower height.

The oven to make bread was a solid piece of stone and mud that was usually annexed to the farmhouse. Inside, there was a cylindrical hole covered by a small dome and, under it, there was another hole left to keep wood and heat the oven.

d Containment structures

At farmhouses, containment structures are usually walls to support the outdoor part of the farmhouse in order to prevent its collapse, in certain cases, on the drying floors. These are masonry walls which are agglomerated with some kind of mortar. This system used to agglomerate masonry has also been used in orchards because there, walls can be higher than the *albarradas*⁷⁰ located at the vineyards. In this regard, there has been a change concerning materials and building techniques. Nowadays, walls are built with brick and cement mortar instead of using stone.

⁷⁰ Stone wall.

1 1 Institutional support

This GIAHS proposal and the Dynamic Action Plan have been developed with the support of the working group established for this purpose (see Annex 12 List of participants in the Technical Committee and Annex 13 Governance process) In addition, several institutions of the area have also supported this proposal by launching initiatives in this regard. This annex sets out the institutions that have shown their institutional support to the proposal.

a Parliament of Andalusia.

The Parliament of Andalusia passed a non-law proposition to support the GIAHS proposal (see Fig. 75.)

b Regional Ministry of Agriculture, Fisheries and Rural Development.

The Regional Minister of Agriculture, Mrs. Carmen Ortiz, in response to a parliamentary question about the actions implemented for the recognition as GIAHS, defended the submission of the proposal of Málaga raisins to the FAO in order to designate them as GIAHS in front of the Andalusian Parliament. To do this, she indicated that the product deserves this recognition (see Fig. 76.).

Moreover, the Vice-Minister of Agriculture. Mr. Ricardo Domínguez, informed the Deputy-Secretary of the Spanish Ministry of Agriculture, Fisheries, Food and Environment of the initiatives launched in Andalusia to submit the proposal of Málaga Raisin Production System in La Axarquía, for their recognition as GIAHS (see Fig. 77.).

c Provincial government of Málaga

The Provincial Government of Málaga⁷¹ passed a motion to support the registration of drying floors (see Fig. 78.)

d Association of municipalities of the area Costa del Sol-Axarquía

This Association⁷² unanimously passed a motion to support the proposal to designate Málaga raisins as GIAHS (see Fig. 79.).

e Local councils

The City council of Almáchar passed an institutional motion to register the traditional drying floors of this municipality (see Fig. 80.). Likewise, the local council of Benamargosa approved a motion to designate raisins and their cultivation as GIAHS (see Fig. 81.).

f Asociación Moscatel (Muscatel Association)

After organising a Conference on the designation as GIAHS in March 2016, the Muscatel Association, focused on the participation in tourism development in Almáchar and on the defence of Muscatel vine growing, raisins and wine production, came to the conclusion that the raisins producing areas of Málaga are genuine enough to be eligible for the GIAHS recognition, as they are very similar to a ""remarkable land use systems and landscapes which are rich in

⁷¹ The provincial government is the institution which is the governing and the administration body of the different provinces.

⁷²It is a free association of municipalities. It has its own legal status and it is created to provide certain services to its partners.

globally significant biological diversity evolving from the co-adaptation of a community with its environment and its needs and aspirations for sustainable development" (Declaration, FAO, 2002).

The "Raisins Board" expressed a similar opinion. It is a group formed by different municipalities, agricultural professional organisations, trade unions and cooperatives, which sent a letter of support to this initiative to the Association (see Fig. 84.).

On this basis, the Association decided to start the procedure to apply for such recognition. To do this, it informed the regional agricultural public administration about this initiative (see Fig. 83.) and then began to draft the application form. The Muscatel Association has been the catalyst of the entire process, acting as link between the Technical Committee, the team drafting the proposal and the companies of the sector (see Fig. 82.).

IMPULSO DE LA ACCIÓN DEL GOBIERNO

PROPOSICIÓN NO DE LEY EN COMISIÓN

10-16/PNLC-000314, Proposición no de ley relativa al apoyo a la candidatura de la uva pasa como SIPAM

Aprobada por la Comisión de Agricultura, Pesca y Desarrollo Rural en sesión celebrada el 13 de diciembre de 2016

Orden de publicación de 22 de diciembre de 2016

PROPOSICIÓN NO DE LEY RELATIVA AL APOYO A LA CANDIDATURA DE LA UVA PASA COMO SIPAM

1. El Parlamento de Andalucía manifiesta su total apoyo a los productores y trabajadores del sector dedicado al cultivo y comercialización de uvas pasas de Andalucía y, en concreto, de la provincia de Málaga, dado que, por sus características en las pendientes laderas de nuestros montes, sus genuinos paseros son una estructura sin par y muestra de nuestra propia idiosincrasia como agricultores, reconociendo por todo ello que, sin lugar a dudas, es un sistema ingenioso del patrimonio agrícola mundial, un SIPAM.

2. El Parlamento de Andalucía insta al Consejo de Gobierno a que, a través de la Consejería de Agricultura, Pesca y Desarrollo Rural, preste el apoyo técnico necesario que contribuirá a la preparación de la candidatura ante la FAO (Organización de las Naciones Unidas para la Alimentación y la Agricultura), al objeto de la inclusión del cultivo de las uvas pasas de Málaga en la Lista de Sistemas Ingeniosos del Patrimonio Agrícola Mundial (SIPAM).

Fig. 75. *Non-law proposition to support the proposal for the designation of Málaga raisins as GIAHS. Parliament of Andalusia. Changes.*

Carmen Ortiz destaca la uva pasa moscatel de Andalucía como un cultivo y un proceso únicos en Europa

La consejera afirma que el producto es justo merecedor de reconocerse como Sistema Ingenioso del Patrimonio Agrícola Mundial por parte de la FAO

Andalucía, 10/11/2016

La consejera de Agricultura, Pesca y Desarrollo Rural, Carmen Ortiz, ha destacado hoy en el Parlamento que la uva pasa moscatel de Andalucía es "un cultivo y un proceso únicos en Europa", por lo que reúne características que la hacen "justa merecedora" de su reconocimiento como Sistema Ingenioso del Patrimonio Agrícola Mundial (Sipam). Esta figura creada por las Naciones Unidas para la Alimentación y la Agricultura (FAO) designa sistemas agroganaderos que se basan en prácticas sostenibles de gestión de los recursos, su especial adaptación a las condiciones locales y su mantenimiento a través de varias generaciones.

En respuesta a una pregunta parlamentaria sobre las actuaciones puestas en marcha para lograr este reconocimiento, la titular de Agricultura ha explicado que la Consejería trabaja desde junio con este fin "en estrecha colaboración" con la Asociación Moscatel y la Mesa de la Uva Pasa. Está previsto disponer del documento de candidatura a principios de 2017 para proceder a su presentación.



La consejera, con representantes del sector de la uva pasa en el Parlamento.

Fig. 76. Support of the Regional Ministry of Agriculture, Fisheries and Rural Development of Andalusia to the proposal for the designation of Málaga raisins as GIAHS

A/A Ilmo. Sr. D. Jaime Haddad Sánchez de Cueto
Subsecretario de Agricultura y Pesca, Alimentación y Medio Ambiente

Paseo Infanta Isabel, 1

28071 Madrid

Sevilla, a 5 de junio de 2017

Ilmo. Sr. Subsecretario de Agricultura y Pesca, Alimentación y Medio Ambiente,

Tengo el gusto de informarle sobre una actividad de gran interés para esta Consejería de Agricultura, Pesca y Desarrollo Rural de la Junta de Andalucía, que se desarrolla en el ámbito del sector productor del viñedo moscatel, y la elaboración de uvas pasas y vino en la Comarca de la Axarquía de Málaga que, como sabe, es la principal zona de producción de uvas pasas en España.

El viñedo moscatel de la Axarquía malagueña ha creado un sistema agrícola propio, modelado y mantenido por innumerables generaciones de campesinos. Un sistema agrícola y un ambiente específico basado en el procesado de los productos de la uva moscatel, especialmente en la transformación de uvas en pasas, que usan prácticas de manejo adaptadas a las condiciones locales, especialmente la orografía y la climatología. Ha sido y continúa siendo esencial en la economía agraria de la zona, al situarse en elevadas pendientes, sin otras alternativas agrícolas viables. Contribuye a evitar la erosión de un clima de lluvias estacionalmente torrenciales, haciendo uso de tecnologías tradicionales, manuales y artesanales en el cultivo, la recolección, la pasificación y el picado-desgranado, lo que supone una tradicional forma de vida que viene a identificar a la comarca con la cultura de la pasa y las tradiciones asociadas.

La Organización de las Naciones Unidas para la Alimentación y la Agricultura, FAO, puso en marcha en 2002 el programa denominado SIPAM, Sistemas Importantes del Patrimonio Agrícola Mundial (GIAHS Globally Important Agricultural Heritage Systems, en inglés). Este programa selecciona sistemas destacables de uso de la tierra y paisajes que evolucionan a partir de la coadaptación de una comunidad con su ambiente y sus necesidades y aspiraciones, para un desarrollo sostenible; sistemas que han sido manejados desde su origen con combinaciones ingeniosas de técnicas y prácticas de eficacia probada, que usualmente han llevado a ser parte integrante de la economía y sociedad de las comunidades locales y la conservación de los recursos naturales y la biodiversidad. Con ello, se pretende incrementar los beneficios internacionales, nacionales y locales de dicho reconocimiento, potenciando el manejo sostenible del sistema, su conservación, la transmisión del patrimonio agrícola a futuras generaciones y, finalmente, el incremento de la viabilidad del cultivo.

Con estas premisas, estamos convencidos de que el sistema productivo del viñedo moscatel y la elaboración de uvas pasas y vino en la Comarca de la Axarquía de Málaga, reúne las características de los sistemas del patrimonio agrícola mundial que la FAO está ya reconociendo a nivel mundial, y de que este impulso y reconocimiento, así como la puesta en marcha de un plan dinámico de acción, sería un revulsivo para la comarca, sus habitantes y las economías locales. De la misma forma, se contribuiría a proteger los conocimientos para la elaboración artesanal de pasas, bien inmaterial, que actualmente se enfrenta al peligro de desaparecer si no se protege de una manera adecuada.

La Asociación Moscatel (para la Participación en el Desarrollo Turístico de Almáchar y la Defensa del Viñedo Moscatel y la Elaboración de Uvas Pasas y del Vino), nacida con el objetivo de poner en valor los oficios, la

cultura y la economía que rodean a los cultivos de viñas y producción de pasas de la variedad moscatel de Alejandría, ha promovido la elaboración de una candidatura de este sistema productivo, junto con sus paisajes, biodiversidad agrícola y sistemas de conocimiento asociados, al programa SIPAM de la FAO. Para ello cuenta con el apoyo de la “Mesa de la Pasa”, colectivo formado por Ayuntamientos de la comarca, Organizaciones Profesionales Agrarias, sindicatos y cooperativas. Destacar también que el Parlamento Andaluz, aprobó por unanimidad en diciembre de 2016 el apoyo a la declaración de SIPAM para la uva pasa, e instó a esta Consejería a prestar el apoyo técnico necesario.

El trabajo de preparación de la candidatura se inició en la primavera de 2016, a raíz de la Jornada Técnica “La Pasa Moscatel, un Sistema Ingenioso de la Agricultura”, desarrollada en la comarca a iniciativa de asociaciones, productores, instituciones y particulares interesados por el reconocimiento SIPAM. Para ello, se constituyó un Comité Técnico que, con el respaldo de la Consejería de Agricultura, Pesca y Desarrollo Rural a través de su Delegación Territorial en Málaga y la Oficina Comarcal Agraria de Axarquía/Costa de Málaga, la coordinación de la Asociación Moscatel, y la secretaría técnica de Agencia de Gestión Agraria y Pesquera de Andalucía (AGAPA), está integrado por especialistas y conocedores del sector de la uva pasa, representantes de otros sectores y ámbitos directamente imbricados en el sistema, que están poniendo de manifiesto la relevancia histórica, económica y social de este sistema productivo así como su relación con otros sectores como el del vino, el turismo, la cultura o el patrimonio arquitectónico y paisajístico, e industrias asociadas, entre otros.

En el Comité Técnico se integran además, el Consejo Regulador de las D.O. “Málaga”, “Sierras de Málaga” y “Pasas de Málaga”, las Organizaciones Agrarias UPA Málaga, COAG Málaga y ASAJA Málaga, el Ayto. de Almáchar, la Asociación para la Promoción Turística de la Axarquía (APTA), la Unión de Cooperativas Paseras de la Axarquía (UCOPAXA), la Cooperativa de Almáchar, la Cooperativa de El Borge, “Sabor a Málaga” de la Diputación Provincial de Málaga, y cuentan con el apoyo de destacados profesionales e investigadores, en los ámbitos de la arquitectura, el paisajismo y la agricultura de la zona.

En este momento el citado Comité Técnico dispone ya de una versión muy avanzada del documento de candidatura de acuerdo a los modelos requeridos por el Secretariado Técnico de SIPAM, y está concluyendo la definición de un plan dinámico de acción, igualmente requerido, y en el que también están participando entidades y personas relevantes de la comarca.

El pasado día 29 de mayo personal de esta Consejería pudo asistir por invitación del Secretariado Técnico de SIPAM al “Taller SIPAM para Europa y Asia Central”, celebrado en la sede de FAO en Roma, en el que se puso de manifiesto el interés de esta organización en identificar estos sistemas agrícolas de ambas regiones, y las anima a presentar candidaturas. En este sentido, y tal y como nos manifestó el Consejero de Agricultura, Alimentación y Medio Ambiente, y Representante Permanente y Alterno de España ante la FAO, D. Antonio Flores Lorenzo, se requiere poner en marcha el procedimiento de presentación de candidaturas, que debe realizarse desde el Ministerio de Agricultura y Pesca, Alimentación y Medio Ambiente,

En consecuencia, le reitero la ilusión que me produce informarle de esta iniciativa, esperando que sea de su agrado, y quedo a su disposición tanto para facilitarle la información que considere necesaria como para dar inicio a los trámites necesarios para la presentación de la candidatura.

Reciba un cordial saludo,

Ricardo Domínguez García-Baquero

Viceconsejero de Agricultura, Pesca y Desarrollo Rural

2

Fig. 77. Letter sent by the Vice-Minister of Agriculture, Fisheries and Rural Development of Andalusia to the Spanish Ministry of Agriculture, Fisheries, Food and Environment.

A la atención del Presidente de la Diputación

MOCION PARA LA COMISIÓN DE SERVICIOS A LA CIUDADANÍA

RELATIVA A REGISTROS DE PASEROS

Francisco Javier Conejo Rueda, Presidente-Portavoz del Grupo Socialista de la Diputación de Málaga, y Antonio Yuste Gámez, diputado provincial, al amparo de lo dispuesto en los artículos 13.b, 60.3 y 102.2.3 del Reglamento de Orgánico de la Diputación Provincial de Málaga, presentan la siguiente Moción que tan solo será votada, pero no debatida por el Pleno.

EXPOSICIÓN DE MOTIVOS

La Diputación Provincial aprobó en pleno por unanimidad el apoyo para que el cultivo de la uva pasa como SIPAM (Sistemas Importantes del Patrimonio Agrícola Mundial), moción que se aprobó en distintos ayuntamientos así como en la Mancomunidad de Municipios Costa del Sol Axarquía. A partir de todo este trabajo se ha constituido una mesa de trabajo por parte de la Consejería de Agricultura de la Junta de Andalucía para poder empezar dicho expediente.

Este Grupo Socialista entiende que cuanto más colaboración se preste a la mesa de trabajo mejor será el resultado. Consideramos todo este proceso de vital importancia para la conservación del patrimonio etnográfico de la comarca de la Axarquía, especialmente todo lo referido a nuestras pasas, un producto tan autóctono, con un sistema de cultivo tan genuino y único, especialmente en el proceso de secado con esos paseros que jalonan nuestro paisaje.

Cualquier visitante que llegue a la Axarquía verá en ella rectángulos sin arar presididos por triángulos blancos que dibujan parte del paisaje de la comarca. Con una geometría perfecta parecen contradecir la visión de un paisaje desigual. Son los paseros. Lo que para un visitante son triángulos y rectángulos, para los habitantes de la Axarquía no

Página 1 de 3

Tercero.- Dar traslado a la Consejería de Agricultura de la Junta de Andalucía y al Ministerio de Agricultura

En Málaga, 31 de marzo de 2017

Fdo.: Francisco Javier Conejo Rueda
Presidente- Portavoz



Fdo.- Antonio Yuste Gámez
Diputado Provincial

Fig. 78. Motion passed by the Provincial government of Málaga

sólo explican el paisaje sino también un sistema productivo y una cultura, la de las pasas y parte de nuestro patrimonio etnológico.

La defensa de los paseros como un bien de nuestra cultura revela un gran interés etnológico su mantenimiento. El pasero se encuentra siempre vinculado a la vivienda de la explotación agraria, por lo que los instrumentos de planeamiento deberían establecer su protección para la más correcta inserción y preservación de los mismos en el territorio.

De acuerdo con la Ley del Patrimonio Histórico Español, se incluye naturalmente la protección del Patrimonio Etnográfico, que establece en su artículo 47: "1. Son bienes inmuebles de carácter etnográfico, y se registrarán por lo dispuesto en los títulos II y IV de la presente Ley, aquellas edificaciones e instalaciones cuyo modelo constitutivo sea expresión de conocimientos adquiridos, arraigados y transmitidos consuetudinariamente y cuya factura se acomode, en su conjunto o parcialmente, a una clase, tipo o forma arquitectónicas utilizados tradicionalmente por las comunidades o grupos humanos". Creemos que esta descripción puede corresponderse exactamente con nuestros paseros de la Axarquía.

Por otro lado la Ley 14/2007, de 26 de noviembre, del Patrimonio Histórico de Andalucía, apuesta por una defensa del Patrimonio Etnológico y en ella también queda claro que los paseros pueden ser protegidos como parte del Patrimonio etnográfico: "Artículo 61. Concepto y ámbito. 1. Son bienes integrantes del Patrimonio Etnológico Andaluz los parajes, espacios, construcciones o instalaciones vinculados a formas de vida, cultura, actividades y modos de producción propios de la comunidad de Andalucía".

Por todo lo anteriormente expuesto, el Grupo Socialista de la Diputación de Málaga propone para su aprobación los siguientes

ACUERDOS:

Primero.- La Diputación Provincial prestara servicio técnico a aquellos ayuntamientos que así lo demanden para la redacción de un registro de paseros que será de forma voluntaria por parte de los vecinos.

Segundo.- La Diputación creará un registro de paseros donde se incluirán todos aquellos que respondan a la definición contenida como pasero recogida en esta moción.

Página 2 de 3



D. MIGUEL BERBEL GARCÍA, SECRETARIO GENERAL DE LA MANCOMUNIDAD DE MUNICIPIOS DE LA COSTA DEL SOL-AXARQUIA

CERTIFICO: Que en la sesión ordinaria celebrada por la Junta de Mancomunidad el día 22 de junio de 2016, se adoptó el siguiente acuerdo:

PUNTO IX.- MOCIÓN QUE PRESENTA EL GRUPO SOCIALISTA DE LA MANCOMUNIDAD RELATIVA A LA INCLUSIÓN DE LA UVA PASA Y SU CULTIVO EN SIPAM (SISTEMAS INGENIOSOS DEL PATRIMONIO AGRÍCOLA COMÚN).

Cuenta con el **dictamen favorable**, por **UNANIMIDAD** de los asistentes, de la Comisión de Recursos y Acción Administrativa celebrada el día 1 de junio de 2016.

Se da cuenta de la Moción:

"El GRUPO MUNICIPAL DEL PSOE-A en la Mancomunidad de Municipios de la Costa del Sol Oriental - Axarquía a través de su portavoz, D^a María Santana Delgado y al amparo de lo dispuesto en el Art. 97.3 del RD 2568\86, de 28 de Noviembre, por el que se aprueba el Reglamento de Organización Funcionamiento y Régimen Jurídico de las Entidades Locales y demás normativa concordante aplicable, presenta la siguiente MOCIÓN y propuesta, para su debate y votación por el PLENO.

RELATIVA A INCLUSIÓN DE LA UVA PASA Y SU CULTIVO EN SIPAM.

EXPOSICIÓN DE MOTIVOS

El Grupo Municipal Socialista trae hoy al debate un tema que consideramos importante para la economía de nuestra Comarca, hablamos de nuestras Pasas, un producto tan especial, con un sistema de cultivo tan genuino de la Comarca de la Axarquía que bien podríamos declarar que se trata de un Sistema Ingenioso, merecedor de pertenecer a la lista del Patrimonio Agrícola Mundial.

El concepto de los SIPAM, (Sistemas Ingenioso del Patrimonio Agrícola Mundial) *"un SIPAM es un sistema vivo, en evolución, de comunidades humanas en una intrincada relación con su territorio, ambiente cultural o agrícola o ambiente biofísico y social más amplio. Los seres humanos y sus actividades de subsistencia se han adaptado continuamente a los potenciales*

Avda. Andalucía, 110 . Torre del Mar. 29740-Vélez-Málaga (Málaga) España
Tel.- 952 54 28 08. Fax.- 952 54 28 04

Página 1 de 3

Fig. 79. Motion passed by the Association of municipalities of the area Costa del Sol-Axarquía.



a las limitaciones del ambiente y también han modelado el paisaje y el ambiente biológico en diferentes grados. Esto ha conducido a una acumulación de experiencias durante generaciones, a un incremento del alcance y profundidad de sus sistemas de conocimientos y, generalmente pero no necesariamente, a actividades de subsistencia complejas y de diferente alcance, a menudo estrechamente integradas". Creemos que este concepto podría equipararse perfectamente a nuestra cultura de viñedo y uva pasa.

Los Sistemas Ingeniosos del Patrimonio Agrícola Mundial son definidos como "Sistemas destacables de uso de la tierra y paisajes, ricos en diversidad biológica, de importancia mundial, que evolucionan a partir de la coadaptación de una comunidad con su ambiente y sus necesidades y aspiraciones, para un desarrollo sostenible" (Declaración de FAO 2002).

Al igual que en nuestra zona en todo el mundo han sido creados, modelados y mantenidos por innumerables generaciones de campesinos, sistemas agrícolas y ambientes específicos basados en recursos naturales diversos que usan prácticas de manejo adaptadas a las condiciones locales. Construyéndose sobre el conocimiento local y la experiencia, estos ingeniosos sistemas agro culturales reflejan la evolución de la humanidad, la diversidad de su conocimiento y sus profundas relaciones con la naturaleza.

La FAO es una Organización de las Naciones Unidas para la Alimentación y la Agricultura, cuyo objetivo es alcanzar la seguridad alimentaria para todos y asegurar que las personas tengan acceso a alimentos de buena calidad que les permitan llevar una vida activa y saludable es la esencia de las actividades de la FAO.

La FAO en respuesta a las tendencias mundiales que amenazan a la agricultura familiar y a los sistemas agrícolas tradicionales, durante la Cumbre Mundial sobre Desarrollo Sostenible (WSSD, Johannesburgo, Sudáfrica en el año 2002,), la Organización de las Naciones Unidas para la Agricultura y la Alimentación (FAO) lanzó una iniciativa mundial sobre conservación y manejo adaptativo de los "Sistemas Ingeniosos del Patrimonio Agrícola Mundial (SIPAM)". <http://www.fao.org/giahs/giahs-initiative/es/>

La meta principal de esta iniciativa es identificar y salvaguardar los Sistemas Importantes del Patrimonio Agrícola Mundial junto con sus paisajes, biodiversidad agrícola y sistemas de conocimiento asociados, estableciendo un programa a largo plazo para apoyar tales sistemas e incrementar los beneficios mundiales, nacionales y locales derivados, a través de su conservación dinámica, manejo sostenible e incremento de su viabilidad.

Avda. Andalucía, 110 . Torre del Mar. 29740-Vélez-Málaga (Málaga) España
Tel.- 952 54 28 08. Fax.- 952 54 28 04

Página 2 de 3



Por todo lo anteriormente expuesto, el Grupo Socialista en la Mancomunidad de Municipios de la Costa del Sol Axarquía, propone para su aprobación los siguientes

ACUERDOS:

Primero .-Declarar que esta Mancomunidad, entiende que nuestro cultivo de UVAS PASAS, por sus características de cultivo en las pendientes laderas de nuestros montes, sus genuinos paseros, una estructura sin par y nuestra propia idiosincrasia como agricultores, es sin lugar a duda un Sistema Ingenioso del Patrimonio Agrícola Mundial, un SIPAM.

Segundo .-Solicitar a la Consejería de Agricultura, Pesca y Desarrollo Rural, preste el apoyo técnico necesario que nos permita, por un lado profundizar en el conocimiento de los SIPAM, la elaboración del expediente de solicitud ante la FAO, (Organización de las Naciones Unidas para la Agricultura y la Alimentación) y finalmente solicite la inclusión del Cultivo de las Uvas Pasas de Málaga en su lista de: Sistemas Ingeniosos del Patrimonio Agrícola Mundial, SIPAM.

Tercero .-Que una vez redactado el informe de solicitud para la FAO, del SIPAM de las uvas pasas moscatel, se acompañe una certificación de apoyo por parte de esta Mancomunidad para conseguir la inclusión en la referida lista de la FAO.

Vélez- Málaga, 21 de Mayo de 2.016. Fdo.: María Santana Delgado, Portavoz del Grupo Socialista en la Mancomunidad de Municipios Axarquía."

Sometida a votación la moción, es **aprobada** por **UNANIMIDAD** de los asistentes.

Así consta en el borrador del acta, a resulta de su aprobación.

Y para que conste y surta los efectos que procedan, expido el presente certificado con las advertencias y salvedades contenidas en el artículo 206 del Reglamento de Organización y Funcionamiento de las Entidades Locales, y con el VºBº del Sr. Presidente, en Torre del Mar, a veintitrés de junio de dos mil dieciséis.



Avda. Andalucía, 110 . Torre del Mar. 29740-Vélez-Málaga (Málaga) España
Tel.- 952 54 28 08. Fax.- 952 54 28 04

Página 3 de 3



D. JAVIER RUPÉREZ BERMEJO, SECRETARIO DEL AYUNTAMIENTO DE ALMÁCHAR (MÁLAGA)

CERTIFICADO:

Que según los antecedentes que obran en esta Secretaría, a mi cargo, resulta que el Pleno de esta Corporación, reunido el día 15 de marzo de 2017, en sesión extraordinaria, aprobó, en el punto nº 2 de la citada sesión, por unanimidad, el siguiente acuerdo que, literalmente, dice lo siguiente:

"PUNTO 2.- MOCIÓN INSTITUCIONAL SOBRE REGISTRO DE PASEROS DEL MUNICIPIO DE ALMÁCHAR:

El GRUPO MUNICIPAL DE PSOE-A en el Ayuntamiento de Almáchar a través de su portavoz, Dº Antonio Yuste Gámez y al amparo de lo dispuesto en el Art. 97.3 del RD 2568/86, de 26 de Noviembre, por el que se aprueba el Reglamento de Organización Funcionamiento y Régimen Jurídico de las Entidades Locales y demás normativa concordante aplicable, presenta la siguiente MOCIÓN propuesta para su debate y votación por el PLENO, y que se propone sea una MOCIÓN INSTITUCIONAL.

REGISTROS DE PASEROS DEL MUNICIPIO.

EXPOSICIÓN DE MOTIVOS.

El Grupo Municipal Socialista, siguiendo con el trabajo desarrollado en los últimos tiempos en defensa de la pasa moscatel y además como complemento al expediente de petición de que el cultivo de la pasa moscatel y su entorno sea declarado, SISTEMAS INGENUOSOS DE LA PAO (SIAPAO).

Consideramos de vital importancia para la conservación del patrimonio etnográfico de nuestro Pueblo, especialmente todo lo referido a nuestras Pases, un producto tan especial, con un sistema de cultivo tan genuino y único, especialmente en el proceso de secado con esos Paseros que jalonan nuestro paisaje.

Cualquier visitante que llegue a la Axarquía vera en ella, rectángulos sin arar presididos por triángulos blancos que dibujan parte del paisaje de la comarca. Con una geometría perfecta parecen contradecir la visión de un paisaje desigual, son "Los Paseros". Lo que para un visitante son triángulos y rectángulos, para los habitantes de La Axarquía no sólo explican el paisaje sino también un sistema productivo y una cultura, la de las pasas y parte de nuestro patrimonio etnológico.

La defensa de Los Paseros, como un bien de nuestra cultura y que se hallan en nuestro término municipal, revela un gran interés etnológico su mantenimiento. El Pasero se encuentra siempre vinculado a la vivienda de la explotación agraria, por lo que los instrumentos de planeamiento deberían establecer su protección para la más correcta inserción y preservación de los mismos en el territorio.



De acuerdo con la Ley del Patrimonio Histórico Español, se incluye naturalmente la protección del Patrimonio Etnográfico, que establece en su artículo: "cuarenta y siete. 1. Son bienes inmuebles de carácter etnográfico, y se registrarán por lo dispuesto en los títulos II y IV de la presente Ley, aquellas edificaciones e instalaciones cuyo modelo constitutivo sea expresión de conocimientos adquiridos, arraigados y transmitidos consuetudinariamente y cuya factura se acomode, en su conjunto o parcialmente, a una clase, tipo o forma arquitectónicas utilizadas tradicionalmente por las comunidades o grupos humanos". Creemos que esta descripción puede corresponderse exactamente con nuestros Paseros en nuestro municipio y en general en la Axarquía.

Por otro lado la Ley 14/2007, de 26 de noviembre, del Patrimonio Histórico de Andalucía, apuesta por una defensa del Patrimonio Etnológico y en ella también queda claro que los Paseros pueden ser protegidos como parte del Patrimonio etnográfico.

"Artículo 61. Concepto y ámbito. 1. Son bienes integrantes del Patrimonio Etnológico Andalúz los parajes, espacios, construcciones o instalaciones vinculados a formas de vida, cultura, actividades y modos de producción propios de la comunidad de Andalucía."

Definición: El Pasero, definición. Llamado de forma habitual toldo, Los Paseros o toldos, para su inscripción deberán responder al siguiente perfil; pedruzcos de tierra en pendiente, delimitados y acondicionados para dejar la uva expuesta al sol y que de forma natural quede transformada en pasa. Debe estar situado en una ladera solana, aislado del viento tener una pendiente uniforme, estar levantado entre 10 o 15 cm de los pasillos o calles que los delimitan. El Pasero o toldo posee un cabecero triangular en su parte superior, donde se pliega el toldo, (lienzo que lo protege), y deberá estar enfoscado. Otra parte del pasero es el combrero, soporte alineado con la pendiente del terreno que arranca en el cabecero y desciende hasta los pies del toldo. Este elemento se sostiene con estacas, dispuestas distancias generalmente superiores a 1,5 m. Los combrosos, solían estar hechos de haces de caña, pero la necesidad de renovación ha motivado que sean sustituidos por tubos de acero o de polipropileno, por lo que se aceptan ambas posibilidades. El objetivo del combroso, junto con el cabecero es evitar que el lienzo toque el fruto mientras está mojado. Los Paseros dispondrá de calles, pasillos de entre 40 y 60 cm, de cota inferior al Pasero y con barras formadas por haces de caña, acero actualmente, para poder sujetar los toldos, cuando estos se extienden por exceso de sol o por lluvia. Las calles sirven para que se pueda desaguar el agua de lluvia y evitar el contacto de esta con las uvas o pasas, pueden incluso estar pavimentadas. Años atrás se hacía con lajas de pizarra y recientemente se hace con homigón ambas fórmulas deben aceptarse.

Por todo lo anteriormente expuesto, el Grupo Socialista en el Ayuntamiento de Almáchar propone para su aprobación los siguientes

ACUERDOS:



Primero.- El ayuntamiento planteará un plan de acción a los vecinos para iniciar un proceso de declaración voluntaria de la existencia de Paseros. En todo caso estos se integrarán en el próximo instrumento de planeamiento municipal, dado que consideramos a los paseros como parte del patrimonio etnográfico del municipio.

Segundo.- El Ayuntamiento creará un registro de paseros donde se incluyan todos aquellos que respondan a la definición contenida como pasero recogida en esta moción.

Tercero.- Dar traslado a la Consejería de Agricultura de la Junta de Andalucía y al Ministerio de Agricultura.

Almáchar, 22 de Febrero de 2.017. Fdo. Antonio Yuste Gámez. Portavoz del PSOE-A Ayuntamiento de Almáchar.

A propuesta del portavoz del grupo municipal socialista D. Antonio Yuste, y aceptada por todos los grupos, se acordó que la Moción fuera considerada como institucional, ya que todos estuvieron de acuerdo en la importancia que puede tener su aprobación para el sector de la pasa y para el municipio en general.

El Sr. Alcalde señaló que cuando se estaba redactando el PGOU, que actualmente está en fase de aprobación provisional, y pendiente de solventar algunos temas con informes sectoriales, que han quedado pendientes de adaptación a Plan Hidrológico de la Junta de Andalucía y crecimiento de viviendas, ya se vio la posibilidad de proteger culturalmente los paseros a través del propio PGOU, y que finalmente no se hizo por el motivo de que podría en el futuro perjudicar a los propios agricultores, que no podrían muchas veces obras de mejora de explotaciones, con pozos, etc, al quedar protegidos los paseros.

No obstante se mostró de acuerdo en aprobar la moción propuesta, siempre que sean los propios agricultores los que inscriban voluntariamente sus paseros y soliciten que queden protegidos sus paseros, con lo que todos estaban de acuerdo.

Dijo que para la cultura de la uva pasa, como sistema ingenioso de cultivo, es importante, y es un tema muy atractivo para futuros visitantes, y como complemento al conjunto etnográfico de la pasa que se pretende poner en marcha.

D. Antonio Yuste señaló que se trata de dar más herramientas de trabajo a la mesa que se ha creado, y además, dijo, los paseros ya figuran en el Atlas del Patrimonio Inmaterial de la Junta de Andalucía.

Puede ser importante, dijo el Sr. Alcalde, llevar este registro de paseros a proteger, tomando como referencia la definición de pasero según el libro de la historiadora local Dña. Josefa Gámez Lozano "Almáchar. Pasado y presente de una comunidad rural de la Axarquía".

Finalmente la moción, pasó a votación de los miembros del Ayuntamiento Pleno, quedando aprobada por unanimidad de los miembros de la corporación



presentes (8 votos a favor de los 9 concejales de derecho que integran el Pleno de la Corporación)"

Y para que conste y surta los efectos que procedan, expido el presente certificado con las advertencias y salvedades contenidas en el artículo 206 del Reglamento de Organización y Funcionamiento de las Entidades Locales, de orden y con el visto bueno del Sr. Alcalde en Almáchar a tres de marzo de dos mil diecisiete.

Vº Bº EL ALCALDE PRESIDENTE,

Fdo: José Gámez Gutiérrez Fdo: Javier Rupérez Bermejo

(firmas electrónicas al margen)



Fig. 80. Agreement of the local council of Almáchar



Ayuntamiento de Benamargosa

CARMEN BORRERO CHECA, SECRETARIA-INTERVENTORA DEL AYUNTAMIENTO DE BENAMARGOSA (MÁLAGA).-

CERTIFICO: Que este Ayuntamiento Pleno, en sesión ordinaria celebrada el día 29 de junio de 2016, adoptó, entre otros, el siguiente acuerdo:

PUNTO N.º 3.- MOCIÓN DEL GRUPO SOCIALISTA DEL AYUNTAMIENTO DE BENAMARGOSA RELATIVA A INCLUSIÓN DE LA UVA PASA Y SU CULTIVO EN SIPAM.

Acto seguido, por parte de D. Antonio Hijano Recio se da lectura del contenido de la propuesta cuyo tenor literal es el que sigue:

"El Grupo Municipal Socialista trae hoy al debate un tema que consideramos importante para la economía de nuestro Pueblo, de nuestras Pasas, un producto tan especial, con un sistema de cultivo tan genuino de la Comarca de la Axarquía que bien podríamos declarar que se trata de un Sistema Ingenioso, merecedor de pertenecer a la lista del Patrimonio Agrícola Mundial.

El concepto de los SIPAM, (Sistemas Ingeniosos del Patrimonio Agrícola Mundial) "un SIPAM es un sistema vivo, en evolución, de comunidades humanas en una intrincada relación con su territorio, ambiente cultural o agrícola o ambiente biofísico y social más amplio. Los seres humanos y sus actividades de subsistencia se han adaptado continuamente a los potenciales y a las limitaciones del ambiente y también han modelado el paisaje y el ambiente biológico en diferentes grados. Esto ha conducido a una acumulación de experiencias durante generaciones, a un incremento del alcance y profundidad de sus sistemas de conocimientos y, generalmente pero no necesariamente, a actividades de subsistencia complejas y de diferente alcance, a menudo estrechamente integradas". Creemos que este concepto podría equipararse perfectamente a nuestra cultura de viñedo y uva pasa.

Los Sistemas Ingeniosos del Patrimonio Agrícola Mundial son definidos como "Sistemas destacables de uso de la tierra y paisajes, ricos en diversidad biológica, de importancia mundial, que evolucionan a partir de la coadaptación de una comunidad con su ambiente y sus necesidades y aspiraciones, para un desarrollo sostenible" (Declaración de FAO 2002).

Al igual que en nuestra zona en todo el mundo han sido creados, modelados y mantenidos por innumerables generaciones de campesinos, sistemas agrícolas y ambientes específicos basados en

Ayuntamiento de Benamargosa

Camino de Vélez, s/n, Benamargosa. 29718 Málaga. Tfn. 95 251 70 02. Fax: 95 251 72 71



Ayuntamiento de Benamargosa

elaboración del expediente de solicitud ante la FAO, (Organización de las Naciones Unidas para la Agricultura y la Alimentación) y finalmente solicite la inclusión del Cultivo de las Uvas Pasas de Málaga en su lista de: Sistemas Ingeniosos del Patrimonio Agrícola Mundial, SIPAM.

Tercero.-Que una vez redactado el informe de solicitud para la FAO, del SIPAM de las uvas pasas moscatel, se acompañe una certificación de apoyo por parte de este ayuntamiento para conseguir la inclusión en la referida lista de la FAO.

Cuarto.-Que se remita el texto de esta moción a los Ayuntamientos malagueños con cultivo de uvas pasas moscatel y a la Excm. Diputación Provincial de Málaga, la mancomunidad de municipios de la Axarquía, para que pueda ser debatida y aprobada en su caso."

Abierto el turno de intervenciones, el Sr. Alcalde comenta que desde su grupo apoyarán la moción.

A continuación, el Sr. Méndez Castro opina que se habla mucho del tema del campo, pero que no hay que olvidar cual es el principal alimento del mismo: el agua. Y que en cuestión de una década se van a tener problemas muy graves. Entendiendo que los políticos deberían mirar más por este tema, ya que es el gran problema de futuro. Aún así, considera que el tema objeto de la moción es interesante.

Contesta D. Antonio Hijano que los viñedos no necesitan agua. Pero que efectivamente lleva razón en esa problemática de su escasez. Y comenta al Pleno que se ha creado un órgano intermediario en esta materia, consultado por todas las comunidades de regantes, de forma que ya se están llevando a cabo reuniones y negociaciones con la Junta de Andalucía, Diputación y la Subdelegación del Gobierno para solventar los problemas de agua. Antes no había organización y por tanto, no se trataba la cuestión.

Manifestadas las consideraciones anteriores, esta Corporación, con la presencia de siete de los nueve Concejales que de hecho y de derecho la componen y previa votación, adopta por unanimidad de los asistentes (cuatro votos del Grupo Popular, uno del Grupo Socialista y dos votos del Grupo Izquierda Unida LV-CA Benamargosa para la Gente) lo que supone mayoría absoluta legal, el siguiente acuerdo:

Primero.-Declarar que este Ayuntamiento, entiende que nuestro cultivo de UVAS PASAS, por sus características de cultivo en las pendientes laderas de nuestros montes, sus genuinos paseros, una estructura sin par y nuestra propia idiosincrasia como agricultores, es sin lugar a duda un Sistema Ingenioso del Patrimonio Agrícola Mundial, un SIPAM.

Ayuntamiento de Benamargosa

Camino de Vélez, s/n, Benamargosa. 29718 Málaga. Tfn. 95 251 70 02. Fax: 95 251 72 71



Ayuntamiento de Benamargosa

recursos naturales diversos que usan prácticas de manejo adaptadas a las condiciones locales. Construyéndose sobre el conocimiento local y la experiencia, estos ingeniosos sistemas agro culturales reflejan la evolución de la humanidad, la diversidad de su conocimiento y sus profundas relaciones con la naturaleza.

La FAO es una Organización de las Naciones Unidas para la Alimentación y la Agricultura, cuyo objetivo es alcanzar la seguridad alimentaria para todos y asegurar que las personas tengan acceso a alimentos de buena calidad que les permitan llevar una vida activa y saludable es la esencia de las actividades de la FAO.

La FAO en respuesta a las tendencias mundiales que amenazan a la agricultura familiar y a los sistemas agrícolas tradicionales, durante la Cumbre Mundial sobre Desarrollo Sostenible (WSSD, Johannesburgo, Sudáfrica en el año 2002.), la Organización de las Naciones Unidas para la Agricultura y la Alimentación (FAO) lanzó una iniciativa mundial sobre conservación y manejo adaptativo de los "Sistemas Ingeniosos del Patrimonio Agrícola Mundial (SIPAM)". <http://www.fao.org/giahs/giahs-initiative/es/>

La meta principal de esta iniciativa es identificar y salvaguardar los Sistemas Importantes del Patrimonio Agrícola Mundial junto con sus paisajes, biodiversidad agrícola y sistemas de conocimiento asociados, estableciendo un programa a largo plazo para apoyar tales sistemas e incrementar los beneficios mundiales, nacionales y locales derivados, a través de su conservación dinámica, manejo sostenible e incremento de su viabilidad.

Por todo lo anteriormente expuesto, el Grupo Socialista en el Ayuntamiento de Benamargosa propone para su aprobación los siguientes

ACUERDOS:

Primero.-Declarar que este Ayuntamiento, entiende que nuestro cultivo de UVAS PASAS, por sus características de cultivo en las pendientes laderas de nuestros montes, sus genuinos paseros, una estructura sin par y nuestra propia idiosincrasia como agricultores, es sin lugar a duda un Sistema Ingenioso del Patrimonio Agrícola Mundial, un SIPAM.

Segundo.-Solicitar a la Consejería de Agricultura Pesca y Desarrollo Rural, preste el apoyo técnico necesario que nos permita, por un lado profundizar en el conocimiento de los SIPAM, la

Ayuntamiento de Benamargosa

Camino de Vélez, s/n, Benamargosa. 29718 Málaga. Tfn. 95 251 70 02. Fax: 95 251 72 71



Ayuntamiento de Benamargosa

Segundo.-Solicitar a la Consejería de Agricultura Pesca y Desarrollo Rural, preste el apoyo técnico necesario que nos permita, por un lado profundizar en el conocimiento de los SIPAM, la elaboración del expediente de solicitud ante la FAO, (Organización de las Naciones Unidas para la Agricultura y la Alimentación) y finalmente solicite la inclusión del Cultivo de las Uvas Pasas de Málaga en su lista de: Sistemas Ingeniosos del Patrimonio Agrícola Mundial, SIPAM.

Tercero.-Que una vez redactado el informe de solicitud para la FAO, del SIPAM de las uvas pasas moscatel, se acompañe una certificación de apoyo por parte de este ayuntamiento para conseguir la inclusión en la referida lista de la FAO.

Cuarto.-Que se remita el texto de esta moción a los Ayuntamientos malagueños con cultivo de uvas pasas moscatel y a la Excm. Diputación Provincial de Málaga, la mancomunidad de municipios de la Axarquía, para que pueda ser debatida y aprobada en su caso.

Y para que conste y surta los efectos oportunos expido el presente certificado con las advertencias y salvedades contenidas en el artículo 206 del Reglamento de Organización y Funcionamiento de las Entidades Locales, que firmo y visa el Sr. Alcalde, en Benamargosa, fecha y firma anotadas al margen

VºBº
El Alcalde

La Secretaria.

Ayuntamiento de Benamargosa

Camino de Vélez, s/n, Benamargosa. 29718 Málaga. Tfn. 95 251 70 02. Fax: 95 251 72 71

Carmen Borrero Checa (P. 4.º B. 2.º)
Secretaria-Interventora del Ayuntamiento de Benamargosa



Fig. 81. Motion passed by the local council of Benamargosa for the designation of Málaga raisins as GIAHS

Asociación MOSCATEL.

(Para la Participación en el Desarrollo Turístico de Almáchar y la **Defensa del Viñedo Moscatel y la Elaboración de Uvas Pasas y del Vino**).

La Asociación Moscatel, constituida formalmente el 17/11/2015 tiene entre sus fines:

α) El fin principal de la Asociación es aprovechar los atractivos turísticos derivados de la economía más importante de la localidad, el cultivo del viñedo moscatel. Potenciando las actuales infraestructura de alojamientos y restauración existente, desarrollarlos, promocionarlos y crear nuevos atractivos a través de la defensa del cultivo moscatel, de otros recursos desaprovechados o de nueva creación. La formación será otra finalidad importante, ya que el municipio cuenta con una gran capacidad de recursos humanos que, formados con las técnicas adecuadas han de lograr un cambio notable en la gestión turística del municipio.

β) **Para lograr estos fines se pretende la creación de un Conjunto Etnográfico, que sirva para transmitir a las nuevas generaciones y visitantes, los conocimientos sobre el Cultivo del Viñedo Moscatel y la Elaboración de las Pasas de Málaga y el Vino, desde los tiempos más remotos hasta la actualidad.**

γ) El Conjunto Etnográfico constará de los siguientes elementos: Actividad museística con la creación de un Museo, Habilitar un Lagar o lagares tradicionales para que puedan ser visitados, promoción de Tienda o tiendas para la venta de producciones derivadas del cultivo moscatel y de otros a él vinculados o a la producción local. Se integrara la promoción del moscatel y sus productos en la organización de eventos lúdicos de promoción encardinados en las tradicionales actividades festivas locales.

En la zona de Málaga, el viñedo Moscatel ha creado un sistema agrícola propio, modelado y mantenido por innumerables generaciones de campesinos; un sistema agrícola y un ambiente específico basado en el procesado de los productos de la uva Moscatel, especialmente en la transformación de uvas en pasas y otros recursos naturales diversos, que usan prácticas de manejo adaptadas a las condiciones locales, especialmente la orografía y la climatología.

Asociación MOSCATEL. (Para la Participación en el Desarrollo Turístico de Almáchar y la Defensa del Viñedo Moscatel y la Elaboración de Uvas Pasas y del Vino). Paseo de la Axarquía 19, 29718, Almáchar, Málaga. NIF es: G93433134. el N° INSCRIPCIÓN EN EL REGISTRO DE ASOCIACIONES DE ANDALUCÍA, 11978, FECHA INSCRIPCIÓN:17/11/2015



Tras organizar en marzo de 2016 unas jornadas sobre el reconocimiento SIPAM de la FAO, la asociación llega a la conclusión de que las zonas paseras de Málaga son lo suficientemente genuinas como para poder optar al reconocimiento SIPAM, al asimilarse bastante a un “Sistema destacable de uso de la tierra y paisaje, rico en diversidad biológica, de importancia mundial, que evoluciona a partir de la coadaptación de una comunidad con su ambiente, sus necesidades y sus aspiraciones, para un desarrollo sostenible” (Declaración FAO 2002)

En similares términos se manifiesta la “Mesa del Pasa”, colectivo formado por diversos ayuntamientos, Organizaciones Profesionales Agrarias, sindicatos y cooperativas, que han remitido a esta asociación un escrito de apoyo a esta iniciativa.

Ante estas premisas, la asociación decide iniciar los trámites para solicitar dicho reconocimiento, comunicando dicha iniciativa a la administración agraria regional y dando comienzo a los trabajos de preparación de la candidatura.

La meta principal es identificar y salvaguardar a las Pasas Moscatel de Málaga como un Sistema Importante del Patrimonio Agrícola Mundial (SIPAM), junto con sus paisajes, biodiversidad agrícola y sistemas de conocimiento asociados. Con ello, se pretende incrementar los beneficios internacionales, nacionales y locales de dicho reconocimiento, potenciando el manejo sostenible del sistema, su conservación, la transmisión del patrimonio agrícola a futuras generaciones y, finalmente, el incremento de la viabilidad del cultivo.

Por la Asociación Moscatel.

V.º B.º El Presidente

Juan Gámez Villalba

José Manuel Díaz Santana

Asociación MOSCATEL. (Para la Participación en el Desarrollo Turístico de Almáchar y la Defensa del Viñedo Moscatel y la Elaboración de Uvas Pasas y del Vino). Paseo de la Axarquía 19, 29718, Almáchar, Málaga. NIF es: G93433134. el N.º INSCRIPCIÓN EN EL REGISTRO DE ASOCIACIONES DE ANDALUCÍA, 11978, FECHA INSCRIPCIÓN:17/11/2015

Fig. 82. Commitment of the Muscatel Association to begin with the proposal.

Asociación MOSCATEL.

(Para la Participación en el Desarrollo Turístico de Almería y la Defensa del Viñedo Moscatel y la Elaboración de Uvas Pasas y del Vino)

Paseo de la Axarquía 19, 29718, Almería, Málaga.

miércoles,
11 de abril
de 2016

Junta de Andalucía

Consejería de Agricultura, Pesca y Desarrollo Rural

D. María del Carmen Ortiz Rivas, Consejería de Agricultura, Pesca y Desarrollo Rural, c/ Tabladilla s/n, 41013 - Sevilla

Estimada Consejera de Agricultura, Pesca y Desarrollo Rural: Hace unos días, concretamente el pasado 15 de marzo, celebramos en Almería, Málaga, organizado por nuestra Asociación Moscatel, una Jornada sobre los Sistemas Ingeniosos del Patrimonio Agrícola Mundial, que como define la FAO son: "Sistemas destacables de uso de la tierra y paisajes, ricos en diversidad biológica, de importancia mundial, que evolucionan a partir de la coadaptación de una comunidad con su ambiente y sus necesidades y aspiraciones, para un desarrollo sostenible" (Declaración de FAO 2002).

En nuestra zona, el viñedo Moscatel ha creado un sistema agrícola propio, modelado y mantenido por innumerables generaciones de campesinos, un sistema agrícola y un ambiente específico basado en el procesamiento de los productos del Moscatel, especialmente en la transformación de uvas en pasas y otros recursos naturales diversos, que usan prácticas de manejo adaptadas a las condiciones locales, especialmente la orografía y a nuestra climatología.

Por eso cuando conocimos que la FAO, en respuesta a las tendencias mundiales que amenazan a la agricultura familiar y a los sistemas agrícolas tradicionales, durante la Cumbre Mundial sobre Desarrollo Sostenible (WSSD, Johannesburgo, Sudáfrica en el año 2002.), la Organización de las Naciones Unidas para la Agricultura y la Alimentación (FAO) lanzó una iniciativa mundial sobre conservación y manejo adaptativo de los "Sistemas Ingeniosos del Patrimonio Agrícola Mundial (SIPAM). Creemos que nuestro sector Moscatel

Asociación MOSCATEL, E-mail. asociacionmoscatel@gmail.com

asentado en la provincia de Málaga, especialmente en la Axarquía merecería que fuese incluido en esa lista de Sistemas Importantes del Patrimonio Agrícola Mundial.

Queríamos por tanto conocer más en profundidad en que consistía un SIPAM, por eso organizamos esa Jornada sobre el SIPAM, donde intervino como ponente Don Rafael Fernández, miembro de AGAPA en Málaga, quien realizó una excelente exposición, que dio a los presentes, el conjunto de representantes del sector Malagueño, a conocer, expresarse y posicionarse a favor de un SIPAM para el Moscatel Malagueño y sus pasas. En la Jornada contamos con la presencia del Delegado Provincial de la Consejería de Agricultura, Pesca y Desarrollo Rural, a quien tenemos que agradecer su presencia y apoyo a la idea de la inclusión del Moscatel en esta lista de la FAO.

La meta principal de esta iniciativa es identificar y salvaguardar a las Pasas Moscatel de Málaga como un Sistemas Importantes del Patrimonio Agrícola Mundial, junto con sus paisajes, biodiversidad agrícola y sistemas de conocimiento asociados, la idea es incrementar los beneficios internacionales, nacionales y locales derivados, a través de su conservación dinámica, manejo sostenible e incremento de su viabilidad.

Estimada Consejera de Agricultura, Pesca y Desarrollo Rural, nuestro deseo es elaborar el expediente a presentar ante la FAO para solicitar esta declaración, pero lo cierto es, que no tenemos capacidad técnica, ni económica para ello, ni somos una organización Gubernamental, algo que es necesario para interactuar con FAO, por lo que nos dirigimos a usted, para recabar su apoyo para con este proyecto. Creemos que su Consejería puede solicitar y presentar ante la FAO, la solicitud de SIPAM para las Pasas de Málaga, además tiene las capacidades necesarias para hacer junto al sector el expediente a presentar ante la Organización para la Agricultura y la Alimentación. Creemos que esta iniciativa indirectamente será beneficiosas para otras zonas de Andalucía, ya que si andamos este camino para las Pasas de Málaga otras zonas o sectores podrían transitar por él.

Asociación MOSCATEL, E-mail. asociacionmoscatel@gmail.com

Página 2

Esperando que aprecie esta solicitud de apoyo para las Pasas Moscatel de Málaga y que esto permita, que en breve se pueda trabajar en la construcción del referido expediente, nosotros estamos dispuestos a la estrecha colaboración en ello. Tuvimos ocasión de contactar con usted en su visita a El Borge y le agradecemos que haya podido comprobar directamente lo que de ingenioso e importante tiene nuestro sector.

En nombre de nuestra Asociación quiero reiterarle nuestro agradecimiento, por su visita y porque estamos seguro de que en el futuro podremos contar con su comprensión y apoyo personal para con el proyecto.

Atentamente.

A handwritten signature in blue ink, consisting of several loops and a long horizontal stroke extending to the right.

*José Manuel Díaz Santana, Presidente de la Asociación
Moscatel.*

Fig. 83. *Statement of the Muscatel Association to the Regional Ministry of Agriculture, Fisheries and Rural Development of Andalusia informing about the proposal.*

La Mesa de la Pasa

Un colectivo formado por diversos ayuntamientos Organizaciones Profesionales Agrarias, sindicatos, cooperativas, etc.

El pasado 15 de marzo, asistimos una gran mayoría de este colectivo a la Jornada sobre el SIPAM que se celebró en Almáchar, Málaga, organizado por la Asociación Moscatel. En la Jornada citadas se puso de manifiesto que las zonas Paseras son lo suficientemente genuinas e ingenioso su cultivo, su disposición en una orografía tan agreste y con una climatología tan seca, que bien podría fácilmente aspirar a formar parte de la lista de los SIPAM de la FAO.

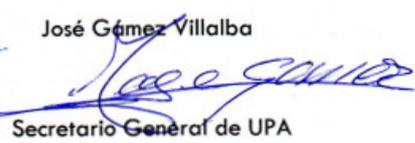
La Mesa de la Pasa, considera que el sector de la Pasa de Málaga es un Sistema Ingenioso del Patrimonio Agrícola Mundial, porque pensamos que este sector es, tal como define la FAO a los SIPAM un: "Sistemas destacables de uso de la tierra y paisajes, ricos en diversidad biológica, de importancia mundial, que evolucionan a partir de la coadaptación de una comunidad con su ambiente y sus necesidades y aspiraciones, para un desarrollo sostenible" (Declaración de FAO 2002).

Por eso apoyamos la iniciativa de la Asociación MOSCATEL, de solicitud de apoyo para trabajar en este expediente para finalmente presentar la solicitud ante la FAO.

Concretamente los siguientes miembros de la Mesa de la Pasa nos adherimos a la solicitud que os dirige la Asociación Moscatel.


D. José Gómez Gutiérrez
Alcalde de Almáchar


Salvador Fernández Marín.
Alcalde de El Borge


José Gómez Villalba
Secretario General de UPA

José Manuel Díaz Santana


Presidente de S.C.A. SANTO CRISTO DE LA BANDA VERDE

Antonio Baena.

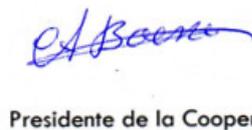

Presidente de la Cooperativa Andaluza San Isidro de el Borge

Fig. 84. Statement of the Raisins Board to support the Muscatel Association

12 List of participants in the Technical Committee

Surname and Name	Gender	Role in the Technical Committee	Organisation
Aranda, Javier	M	Agricultural Engineer. Director of Quality of the Regulating Board of the Protected Designation of Origin	Regulating Board of the Protected Designation of Origin “Málaga”, “Sierras de Málaga” and “Pasas de Málaga” (Málaga raisins)
Aranda, José Antonio	M	Industrial Technical Engineer. Head of the AGAPA Office for the province of Málaga	AGAPA: Agencia de Gestión Agraria y Pesquera de Andalucía (Agency for the Management of Agriculture and Fisheries of Andalusia)
Baena, Antonio	M	Grapes and raisins producer. President of the Cooperativa “San Isidro”, El Borge	Cooperativa “San Isidro” (Raisins Cooperative “San Isidro”, municipality of El Borge)
Del Moral, José	M	Agricultural Engineer. Head of the OCA Axarquía	OCA Axarquía: Agricultural District Office for La Axarquía
Faulí, Benjamín	M	Secretary General and Technician at ASAJA Málaga	ASAJA Málaga: Asociación Agraria de Jóvenes Agricultores (Agricultural Organisation of Young Farmers at the province of Málaga)
Fernández, Rafael	M	PhD in Agricultural Engineering. Technician at the Department for International Relations of AGAPA in Málaga	AGAPA: Agencia de Gestión Agraria y Pesquera de Andalucía (Agency for the Management of Agriculture and Fisheries of Andalusia)
Gámez, Josefa	F	PhD in History. Josefa Gámez Lozano, historian and honorary citizen of the city of Almáchar. Author of: “Almáchar, pasado y presente de una comunidad rural de La Axarquía” (“Almáchar, past and present of the rural community of La Axarquía”)	Member of Asociación “Moscatel” (Muscatel Association for the development of tourism in Almáchar and the defence of vine growing, raisins and wine).
Gámez, Juan	M	Grapes and raisins producer. Former Head of the AGAPA Office for the province of Málaga. Former member of the Parliament of Andalusia. Main promoter of Málaga vine growing tradition and the raisins production system of La Axarquía for the designation as GIAHS	Member of Asociación “Moscatel” (Muscatel Association for the development of tourism in Almáchar and the defence of vine growing, raisins and wine).
García, Juan Antonio	M	Secretary General at COAG Málaga. Farmer and	COAG Málaga: Unión de Agricultores y Ganaderos (Union of

		beekeeper.	Farmers and Livestock producers of Andalusia at the province of Málaga)
García-Agua, Leonor	F	Area manager at “Sabor a Málaga”, Diputación de Málaga	“Sabor a Málaga”: brand of local food products of the province of Málaga Diputación de Málaga: Málaga Provincial Government
Gutiérrez, Antonio Manuel	M	Agricultural Engineer. Former Managing Director of DAP, S.A. Grapes producer	DAP, S.A. (Public Company for the Development of Agriculture and Fisheries of Andalusia) which was the former name for AGAPA Agencia de Gestión Agraria y Pesquera de Andalucía (Agency for the Management of Agriculture and Fisheries of Andalusia)
López Toledano, María Teresa	F	Agricultural Engineer. Technician at the Department for Prospective Studies of AGAPA	AGAPA: Agencia de Gestión Agraria y Pesquera de Andalucía (Agency for the Management of Agriculture and Fisheries of Andalusia)
Lozano, Juan	M	Graduate in Construction Engineering. Specialist in architecture and rural buildings, materials and techniques related to vineyards and the raisins production system of La Axarquía	-
Moreno, José Manuel	M	Oenologist. Secretary of the Regulating Board of the Protected Designation of Origin. Director of the Wine museum of Málaga	Regulating Board of the Protected Designation of Origin “Málaga”, “Sierras de Málaga” and “Pasas de Málaga” (Málaga raisins)
Muñoz, Salvador	M	Manager at UCOPAXA. Grapes and raisins producer	UCOPAXA: Unión de Cooperativas Paseras de La Axarquía (Union of Raisins Cooperatives of La Axarquía. It brings together 8 Cooperatives, more than 800 raising producers and about 60% of total raisins production in La Axarquía)
Páez, Elisa	F	Quality Technician in SICTED (Comprehensive System of Spanish Tourism Quality in Destinations). Manager at APTA	APTA: Asociación Para la Promoción Turística de la Axarquía (Association for Tourism Promotion in La Axarquía)
Polonio, David	M	Agricultural Engineer. Technician at the Department for Prospective Studies of AGAPA	AGAPA: Agencia de Gestión Agraria y Pesquera de Andalucía (Agency for the Management of Agriculture and Fisheries of

			Andalusia).
Ríos, María	F	Technician of the Development Area at Ayto. de Almáchar	Ayto. de Almáchar: Almáchar City Council
Rosado, Juan Rogelio	M	Agricultural Engineer. Master Degree in Wine Tourism. Technician at UPA Málaga	UPA: Unión de Pequeños Agricultores y Ganaderos (Union of Small Farmers and Livestock producers of Andalusia at the province of Málaga)
Salas, Javier	M	PhD. in Biology and Lawyer. Provincial Delegate of the CAPDER in the province of Málaga.	CAPDER: Consejería de Agricultura, Pesca y Desarrollo Rural (Regional Ministry for Agriculture, Fisheries and Rural Development, Regional Government of Andalusia)
Vivar, José Luis	M	Agricultural Engineer. Technician at OCA Axarquía	OCA Axarquía: Agricultural District Office of La Axarquía
García, Susana	F	PhD. In architecture	-

Table 11 List of participants in the Technical Committee.

13 Governance process

a The starting point

The Muscatel Association was created with the aim of highlighting and showcasing the professions, culture and economy that vine growing and the production of raisins of the variety “Moscatel de Alejandría” involve. In late 2015, this association contacted the relevant stakeholders in order to prepare a proposal to the FAO GIAHS programme regarding this production system, along with its landscapes, agricultural biodiversity and associated knowledge systems.

The association had the support of the “Mesa de la Pasa” (“Raisins Board”), a group made up by municipalities of the district of La Axarquía, Agricultural Professional Organisations, Cooperatives and the Regulating Board of the Protected Designation of Origin “Málaga”, “Sierras de Málaga” and “Pasas de Málaga” (Málaga raisins).

b The agreement

In the spring of 2016, stakeholders agreed to start preparing the proposal during the workshop entitled “La pasa Moscatel, un sistema importante e ingenioso de la agricultura” (“Muscatel raisins, an important and smart agricultural system”). It was held in the municipality of Almáchar, the core of the Muscatel vine growing and raisins producing area of the district of La Axarquía.

The celebration of this workshop was promoted by associations, producers, institutions and the public at large who were interested in the designation of this system as GIAHS and it was chaired by the Provincial Delegate of the Regional Ministry for Agriculture, Fisheries and Rural Development of Andalusia.

c The strategy

Immediately after, the participative process for the preparation of the proposal started focusing on three different tasks developed at the same time:

- Raising awareness and encouraging the interest and participation of institutions, organisations, producers, other relevant stakeholders and communities, as well as public at large
- Involving relevant institutions in the project and requesting for support for the initiative
- Setting up a Technical Committee (hereinafter TC) for the development of the proposal

d TC appointments and roles

The TC was set in May 2016 and is made up by experts at grapes and raisins production and other related sectors than could add value and highlight the historical, economic and social relevance of this production system as well as its relationship with other sectors such as wine, tourism, culture or architectural and landscape heritage, and associated industries, among others.

The TC has:

- been promoted by the Regional Ministry of Agriculture, Fisheries and Rural Development of Andalusia via the Provincial Delegation and the Agricultural District Office of La Axarquía

- been coordinated by Asociación Moscatel (Muscatel association)
- been supported, advised and monitored by the Agency for the Management of Agriculture and Fisheries of Andalusia that has played the role of Technical Secretariat
- also involved the Regulating Board of the Protected Designation of Origin “Málaga”, “Sierras de Málaga” and “Pasas de Málaga” (Málaga raisins); the Agricultural Organisations ASAJA, UPA and COAG; the municipality of Almachar; the Association for Tourism Promotion in La Axarquía; the Union of Raisins Cooperatives of La Axarquía; Almachar and El Borge raisins Cooperatives; the brand of local food products of the province called “Sabor a Málaga”, as well as outstanding professionals and researchers in the fields of history, architecture, landscape and agriculture in the area (see annex List of participants in the Technical committee for the preparation of the proposal, for further details)

e TC schedule

- June 2016: 1st TC meeting. Prior to the meeting, a first draft of the proposal, following the official template for the GIAHS proposal, was sent to the TC members. Additionally, a list of technical issues and criteria to be faced by each TC member and an “ad hoc” template for contributions was also sent.
- June-December 2016: after the 1st TC meeting, work was done in the background: raising awareness, involving relevant institutions, asking for support and managing the contributions of the TC members to the draft of the proposal. This resulted in a first draft of the dynamic conservation plan of Málaga Raisin Production System in La Axarquía. During this period, the Parliament of Andalusia unanimously passed in early December 2016 the support for the designation of the raisins production system as GIAHS (see also Annex 11 Institutional support).
- December 2016 - June 2017: 2nd TC meeting. After the meeting, work was done by the members in the background, as in the previous period. It is important to note here that prior to the 3rd and final TC meeting, in May-June 2017, the main stakeholders at different levels in the main municipalities of the production area (Moclín, El Borge, Almachar and Iznate) were surveyed regarding the measures and actions proposed for the dynamic conservation plan. A total of 55 contributions were received and analysed.
- During this period, the GIAHS National representatives belonging to the Spanish Ministry of Agriculture, Fisheries, Food and Environment were contacted to inform them about the GIAHS proposal and involve them in the designation procedure. Additionally, a member of the TC attended the “GIAHS Workshop for Europe and Central Asia” held at FAO Headquarters in Rome on May 29, 2017, as per invitation of the GIAHS Technical Secretariat.
- June 2017: 3rd and final TC meeting. The full proposal (including the dynamic action plan and annexes) was agreed and the preparations for the final workshop in Almachar began.
- September 2017: 4th meeting, the first after the GIAHS Scientific Committee. The TC is informed about the trip made to the Beijing International Agricultural Fair (China) where Málaga Raisins proposal was presented.
- November 2017: 5th meeting, the second after the GIAHS Scientific Committee. The TC is informed about the contributions made by the Scientific Committee and its visit is prepared for on November 17th.

f The Application

A final informative event was held in Almáchar on July 6, led by Muscatel Association together with the Regional Ministry of Agriculture, Fisheries and Rural Development of Andalusia in order to present the final application pack to stakeholders and public at large.

A representative from the Spanish Ministry of Agriculture, Fisheries, Food and Environment also attended the event. The representative was officially requested by organisers to submit the application pack for the designation of Málaga Raisins as FAO GIAHS to the GIAHS Technical Secretariat.

g Additional information: TC meetings

i 1st TC meeting: June 29, 2016. Agenda:

- Introduction of the members of the Committee, general overview and objectives, expected results
- Review of GIAHS criteria
- Summary of contributions to the draft
- Round table: weaknesses and strengths of the draft, alternative or additional information needed, expected contributions, requests and stakeholders to be consulted
- Next steps and schedule

ii 2nd TC meeting: December 19, 2016. Agenda:

- General overview and objectives. News about the application process
- General overview of the proposal. Debate about the most relevant weaknesses and distribution of tasks to be done per TC member
- Analysis of the first draft of the dynamic conservation plan. Debate about measures and actions. Further activities to be done
- Next steps and schedule

iii 3rd TC meeting: June 26, 2017. Agenda:

- General overview and objectives. News about the application process
- News about GIAHS workshop in Rome, criteria for European proposals. Designation process
- Review of final documents and annexes. Final agreement
- Final workshop in Almáchar. Proposal for contents, attendees, public awareness-raising activities
- Next steps and schedule

iv 4th TC meeting: September 27, 2017. Agenda:

- Information about the trip made to the Beijing International Agricultural Fair (China).
- Next steps.

v 5th TC meeting: November 7, 2017. Agenda:

- Presentation and purpose of the meeting. Current situation of the proposal.
- Progresses made on the comments suggested by the Scientific Committee in the evaluation of the proposal
- Organisation of the field visit of the GIAHS Scientific Committee. Revision of schedule and activities suggested.
- Next steps and schedule.

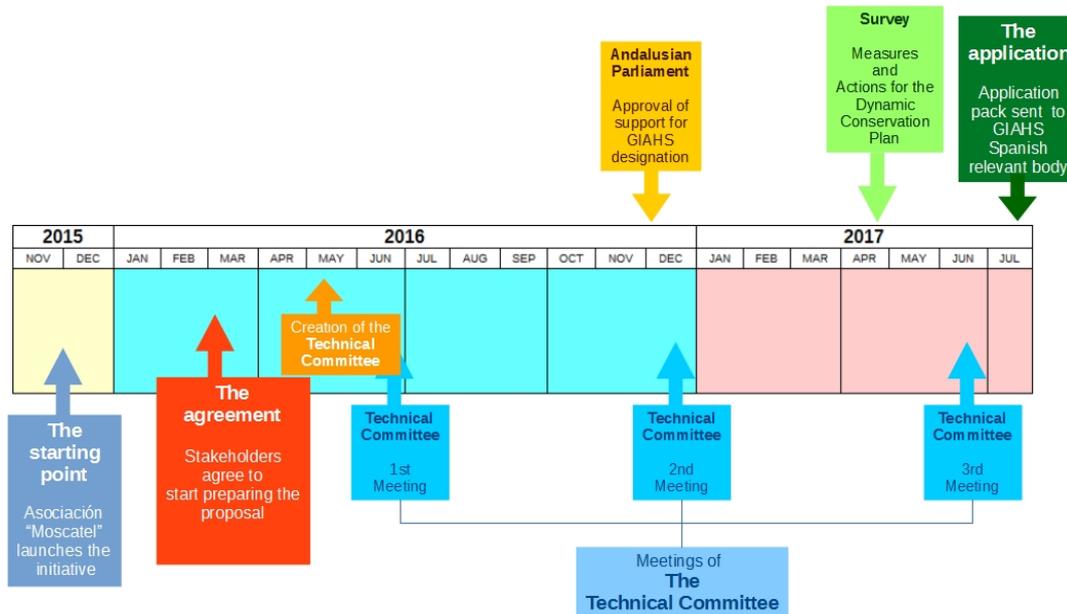


Fig. 85. Process followed for the preparation and submission of the proposal until the presentation of the proposal

14 Factsheets of the measures included in the Dynamic Action Plan

Strategic Line 1: Conserving and improving the productive system	
Measure	1.- Maintaining the drying floors
Current situation and challenges	<ul style="list-style-type: none"> • Drying floors that are not being used, deteriorated and/or in bad conditions. • Lack of a drying floors GIS with related information (coordinates, state of conservation, ...). • Need to create a body to protect the drying floors, especially under the current urban pressure.
Objectives	<ul style="list-style-type: none"> • Improving the current conditions of the drying floors. • Protecting the drying floors as key elements in the system, and creating an updating a drying floors register.

Operation	Objectives of the operation	STAKEHOLDERS (* Leading stakeholder	Schedule (year)					Comments
			1	2	3	4	5	
1.1.- Creation of a georeferenced register of traditional drying floors and vines	Improving and extend the current registration of drying floors and vines, that currently exist in the Regulating Board, to the entire sector.	Regulating Board of the Protected Designation of Origin Pasas de Málaga (Málaga raisins).						The Regulating Board has the current register of drying floors (non-georeferenced) and vines, although this only includes those that are protected by the Regulating Board. The municipalities will provide information on the location of the drying floors so that this register can be georeferenced.
	Creating a specific GIS for the drying floors including the whole information compiled.	Municipalities of the district. (* Competent administration ⁷³ .						
1.2.- Urban protection of the drying floors	Protecting the drying floors from the urbanistic point of view.	(* Each of the municipalities of the productive areas.						The municipalities concerned shall create the register by means of passing the specific corresponding motion.
	Having a municipal list of drying floors who have voluntarily received the protection seal.							
1.3.- Promoting the conservation of these structures.	Improving the current situation of the drying floors, especially those that are not used in all the production campaigns.	(* Associative Fabric and cooperatives. Regulating Board of the Protected Designation of Origin Pasas de Málaga (Málaga raisins). Competent administration.						Campaigns to embellish and improve the drying floors Formalization of agreements with the competent administrations for the incorporation of actions into professional education. Organization of workshops.

⁷³Regional public administrations: CAPDER: Spanish acronym for the Regional Ministry of Agriculture, Fisheries and Rural Development of Andalusia. CMA: Spanish acronym for the Regional Ministry of Environment and Territorial Planning of Andalusia. CE: Spanish acronym for the Regional Ministry of Education of Andalusia.

Strategic Line 1: Conserving and improving the productive system	
Measure	2.- Conserving the means of production.
Current situation and challenges	<ul style="list-style-type: none"> • Problems of erosion in soils. • Aged plantations • Decrease in mules' population
Objectives	<ul style="list-style-type: none"> • Improving the current conditions of vineyards and their means of production.

Operation	Objectives of the operation	STAKEHOLDERS (* Leading stakeholder	Schedule (year)					Comments
			1	2	3	4	5	
2.1.- Improving the environmental sustainability.	Fighting against erosion	(* Farmers in the producing area Competent administration						Fight against erosion through agri-environmental measures such as those included in the EU's rural development policies "Maintenance of unique systems: raisins"
	Increasing biodiversity							Plant native species in neighbouring non-cultivated areas to maintain soil and biodiversity
2.2.- Conserving and improving crops.	Renovating aged plantations.	Farmers in the producing area Regulating board of the Protected Designation of Origin Pasa de Málaga (Málaga raisins) (* Competent administration IFAPA ⁷⁴						The Regulating Board and IFAPA will advise farmers on the access to plant material to renew plantations.
	Facilitating the access to quality plant material.							
2.3.- Maintaining and conserving mules population.	Preserving populations of mules by promoting their advantages over other equines	Regulating board of the Protected Designation of Origin Pasa de Málaga (Málaga raisins) Municipalities of the producing area (* Associative Fabric and cooperatives ⁷⁵ Competent administration.						Create an association of mules' friends that, with the support of the local councils, the Regulating Board and the Associative Fabric, will transmit and promote the role played by mules in the producing sector

⁷⁴IFAPA: Andalusian Institute for Research and Training in Agriculture, Fisheries, Foods and Organic Production

Strategic Line 1: Conserving and improving the productive system	
Measure	3.- Technological improvements
Current situation and challenges	<ul style="list-style-type: none"> • Development of agricultural tasks by hand. • Use of traditional tools which are not very technologically advanced. • Use of outdated technology which must be further developed to increase its productivity.
Objectives	<ul style="list-style-type: none"> • Encouraging the technological changes needed to increase the efficiency and productivity of the crop.

Operation	Objectives of the operation	STAKEHOLDERS (* Leading stakeholder	Schedule (year)					Comments
			1	2	3	4	5	
3.1.- Automating awnings.	Developing systems for automation, by means of sensors on the awnings to protect raisins from rain or excessive heat	(* Andalusian Universities ⁷⁶ IFAPA Regulating board of the Protected Designation of Origin Pasas de Málaga (Málaga raisins)						Start up work lines to adapt the systems that already exist to the type of awnings used in the growing area. The Regulating Board and the sector (through the cooperatives) will be responsible for disseminating the improvement made, once it is set.
	Transferring technology to the sector to enable its uptake							
3.2.- Improving the sun-drying system.	Researching on the improvements in the sun-drying system, thus maintaining the quality of raisins	(* Andalusian Universities IFAPA						Implementation of research lines in which Andalusian Universities, IFAPA and the sector will collaborate to develop improvements concerning grapes sun-drying systems.
	Transferring technology to the sector to enable its uptake	Associative Fabric and cooperatives						
3.3.- Improving tools, agricultural machinery and farming techniques.	Developing new tools and agricultural equipment adapted to the crop	(* Andalusian Universities IFAPA Associative Fabric and cooperatives						Implementation of research projects between Andalusian Universities, IFAPA and the sector, in order to develop tools more adapted to the crop, as well as new machinery adapted to the steep slopes, electric scissors, etc. which will improve growing and production tasks. Promotion and collaboration with research institutes to study new agricultural techniques.
	Researching on new agricultural techniques							
	Transferring technology to the sector to enable its uptake							
3.4.- Implementing telematic control systems during grapes production and drying	Setting up telematic control systems of parameters which will allow to monitor the crop, determining the ideal moment of harvesting, as well as the optimum drying level of grapes, in order to increase the quality of the product	(* Andalusian Universities IFAPA Associative Fabric and cooperatives						Implementation of research projects between Andalusian Universities, IFAPA and the sector.

Strategic Line 1: Conserving and improving the productive system	
Measure	4.- Actions to prevent the abandonment of vine growing.
Current situation and challenges	<ul style="list-style-type: none"> • Very unattractive production system for young people (low-tech manual labour) • Low crop profitability, which makes it unattractive
Objectives	<ul style="list-style-type: none"> • Developing actions that make the activity attractive to young people.

Operation	Objectives of the operation	STAKEHOLDERS (*) Leading stakeholder	Schedule (year)					Comments
			1	2	3	4	5	
4.1.- Promoting producers associations.	Promoting producers associations to share means of production and reduce costs	Local farmers Relevant local, provincial and regional public administration (*) Associative fabric and cooperatives: Asociación Moscatel, UCOPAXA, etc.						The promotion of associations will take place on several fronts by taking advantage of the existing institutional support for this at local, provincial or regional levels, and under the framework of the Management Association.
4.2.- Promoting entrepreneurship and raisins production among young people	Encouraging young people's commitment to farming, by promoting it as a promising business activity	Competent administration. (*) Associative Fabric and cooperatives The Regulating Board						Training workshops will be organised for entrepreneurs and unemployed people. Training actions can be also developed to optimise farms and to professionalize farmers. The measure already existing at local, provincial and regional level will be used. It will be managed by associations and the Regulating Board of the Protected Designation of Origin in order to promote the relationship between the existing and new producers.
	Encouraging young people to create businesses to provide services and manage farms							

⁷⁵The associative fabric is understood as all associations of cultural, local, environmental, academic or economic nature between having as interests some of the activities performed in the raisins producing system.

⁷⁶Depending on the field of study and the specific programme, the Universities of Málaga, Sevilla, Córdoba, Granada, etc. will lead and collaborate in the activities

Strategic line 2: Improving marketing strategies	
Measure	5.- Promotion
Current situation and challenges	<ul style="list-style-type: none"> Product whose consumption and demand has fallen. Need to improve the economic sustainability of the system by increasing the demand for the product.
Objectives	<ul style="list-style-type: none"> Promoting the product using various and adapted promotional actions. Promoting marketing through new channels and using new technologies.

Operation	Objectives of the operation	STAKEHOLDERS (* Leading stakeholder	Schedule (year)					Comments
			1	2	3	4	5	
5.1.- Promotion on social networks and on those related to the location of consumers.	Reaching new consumers, those who are regular users of new technologies and communication networks.	(* Associative Fabric and cooperatives The Regulating Board Competent administration ⁷⁷						Promotion of the consumption of raisins through promotional actions linked to new technologies will help to reach younger consumers. The promotion associated with the location of consumers is useful for immediacy but it requires wide coordination.
5.2.- Promotion in retail outlets, food fairs and sports events.	Highlighting the product through tastings and promotion of its nutritional benefits. These activities will be developed according to the target audience of each event.	Associative Fabric and cooperatives (* The Regulating Board Competent administration						Promotional and tasting activities in sports activities (cycle routes, races, marathons, etc.) at provincial, regional and national level. Participation in agri-food fairs in order to promote the nutritional and health benefits.
5.3.- Development of promotion joint actions combining production, marketing and tourism	Coordinating promotional actions at all levels of the area to take advantage of synergies.	Associative Fabric and cooperatives (* The Regulating Board						Coordination of the promotional actions carried out in the area by producers, marketers, restaurateurs, organisers of sporting events, etc. in order to boost and take advantage of the synergies concerning the knowledge and promotion of the product.
	Creating a trademark or seal to identify raisins as a food of the Mediterranean diet.	Municipalities of the producing area Competent administration						Creation of a trademark or seal for the raisins produced in La Axarquía, which will enable to identify its potential as a food of the Mediterranean diet and as a product included in the Atlas of the Intangible Heritage of Andalusia.

⁷⁷Promotional actions can be carried out together with the promotion initiatives already developed by public administrations in different areas and locations, thus complementing the objectives already carried out. Therefore, there are fairs and events organised by county councils, provincial governments and by the Regional Ministry of Agriculture, Fisheries and Rural Development of Andalusia, the Regional Ministry of Tourism and Sports of Andalusia, the Regional Ministry of Employment, Businesses and Trade, etc. The implementation of the actions included in the Plan must be adapted and coordinated with the existing ones. The Management Association will be in charge of coordinating these actions in collaboration with the Regulating Board of the Protected Designation of Origin Pasas de Málaga (Málaga raisins) and the associative and productive fabrics.

Strategic line 2: Improving marketing strategies	
Measure	6.- Synergies between companies. Business collaboration
Current situation and challenges	<ul style="list-style-type: none"> • Atomization of the agri-food products produced in the region with regards to promotional issues. • Small or medium-sized enterprises with no capacity to carry out promotional campaigns. • Coordination and use of the synergies between complementary agri-food products.
Objectives	<ul style="list-style-type: none"> • Promoting the product by making the most of the synergies between producing enterprises and different products.

Operation	Objectives of the operation	STAKEHOLDERS (* Leading stakeholder	Schedule (year)					Comments
			1	2	3	4	5	
6.1.- Coordination between companies to launch generic advertising campaigns and incorporate innovation.	Reducing costs and helping companies to promote their products.	Associative Fabric and cooperatives (* The Regulating Board						Development of a generic promotional campaign which can be used as a starting point for the individual promoting of companies. Enabling the access of all types of companies to promotional innovation.
6.2.- Making the most of the synergies between similar products produced in the area: oil, honey, wine, almonds, figs, etc.	Stimulating innovation and diversification in presentations of local and related products in order to reach more consumers	Associative Fabric and cooperatives (* The Regulating Board						Development of joint presentations of related products based on needs already identified (gift packages, slow food, etc.) Encouraging the sale of products of the area in shops of the area and nearby tourist areas (proximity trade, short supply chains, etc.) in order to favour the interaction with local products (wines, almonds, figs, oils, etc.)

Strategic line 2: Improving marketing strategies	
Measure	7.- Product diversification
Current situation and challenges	<ul style="list-style-type: none"> • Raisin are a product which is marketed with very little diversification of packaging formats • The needs of current consumers are very different and divergent. • If it is not well preserved, raisins can lose quality and this will result in producers reducing the time to market them
Objectives	<ul style="list-style-type: none"> • Manufacturing of products and packaging formats more adapted to the needs of current consumers

Operation	Objectives of the operation	STAKEHOLDERS (* Leading stakeholder	Schedule (year)					Comments
			1	2	3	4	5	
7.1.- Promoting the use of new packaging formats and presentations	Reusing traditional packaging formats	Associative Fabric and cooperatives (* The Regulating Board						Reuse of traditional packaging formats (small jars, as a bunch, etc.) Detection and adaptation of the packaging formats to the new needs of consumers (size of families, sports use, use for cooking, etc.) Enabling the use of vacuum packaging and other storage techniques (lyophilization) of the product in order to increase the time to market the product, as well as the best-before date.
	Innovating with packaging formats adapted to new needs							
	Increasing the expiry and best-before dates.							
7.2.- Promoting the development of new derivative products for new sectors and market niches (ice cream, pastry, energy bars, etc.).	Detecting and boosting the consumption of raisins in new market niches and sectors	Associative Fabric and cooperatives (* The Regulating Board						Promotion of the development of new products and derivatives for emerging and innovative sectors (ice cream, pastry, energy bars, creative home cooking, vending machines, etc.)

Strategic line 2: Improving marketing strategies	
Measure	8.- New marketing approaches.
Current situation and challenges	<ul style="list-style-type: none"> The current marketing is a continuation of previous decades, with hardly any modernization or adaptation to new forms of consumption. There is a great loss of national and international consumers. Consumers are not aware of the differential characteristics of Málaga Raisins compared to other raisins
Objectives	<ul style="list-style-type: none"> Increasing the range of markets in which Málaga Raisins can be sold. To do this, new technologies and innovation can be used as well as adapting the product to the new needs and interests of consumers.

Operation	Objectives of the operation	STAKEHOLDERS (* Leading stakeholder	Schedule (year)					Comments
			1	2	3	4	5	
8.1.- Promoting online marketing.	Opening to new marketing technologies in order to favour the development of promotion and marketing web pages and blogs	Associative Fabric and cooperatives (* The Regulating Board Competent administration						Boosting the creation and incorporation of information in websites and blogs to disseminate the nutritional benefits of Málaga raisins. Direct marketing with remote consumers The lines and actions already active developed by the relevant public administrations will be used.
8.2.- Boosting marketing in specialised shops and emerging markets (organic, slow food, fair trade), along with other local products	Boosting marketing in specialized stores and emerging markets (organic, slow-food, fair trade), in synergy with other local products.	(* Associative Fabric and cooperatives The Regulating Board						Promotion of short marketing channels Promotion of marketing in specialized stores Interaction and promotion of synergies with emerging forms of consumption and trade (organic, slow food, fair trade, etc.)
8.3.- Promotion of international business lines	Boosting the opening and recovery of foreign markets	Associative Fabric and cooperatives (* The Regulating Board Competent administration						Identification of new needs of foreign markets which already know the product and win them back based on differential characteristics compared to other raisins. Reach new markets by promoting the qualities of the product, introducing the appropriate packaging formats. The lines and actions already active developed by the relevant public administrations will be used.

Strategic line 3: Conserving and transmitting agricultural heritage	
Measure	9.- Handicraft linked to the productive system.
Current situation and challenges	<ul style="list-style-type: none"> Traditional production system that uses specific utensils and tools made by farmers There is a need to launch measures to conserve those utensils and tools that are used in the production process.
Objectives	<ul style="list-style-type: none"> Conserving the knowledge and traditional tools and utensils to avoid their disappearance. Encouraging young people to learn to make their own traditional utensils and tools

Operation	Objectives of the operation	STAKEHOLDERS (* Leading stakeholder	Schedule (year)					Comments
			1	2	3	4	5	
9.1.- Creation of an inventory of traditional tools and utensils used for the production of raisins	Making a detailed list of the traditional utensils and tools and their uses in the raisin producing area	Competent administration (* Associative Fabric and cooperatives Regulating Board of the Protected Designation of Origin "Pasas de Málaga" (Málaga raisins)						Once the inventory is carried out, teaching material could be developed to be disseminate it amongst society at large and schoolchildren: posters, flyers, videos,...
9.2.- Conserving tools and utensils used for raisins production	Transmitting the knowledge needed to manufacture the traditional utensils and tools to conserve them	Competent administration (* Associative Fabric and cooperatives						Organisation of training workshops where farmers and other people interested in the topic can learn how to manufacture objects and traditional tools and utensils linked to vine growing.

Strategic line 3: Conserving and transmitting agricultural heritage	
Measure	10.- Conserving and transmitting the heritage used for production.
Current situation and challenges	<ul style="list-style-type: none"> Progressive loss of agricultural knowledge, practices and uses needed to continue this traditional production.
Objectives	<ul style="list-style-type: none"> Transmitting knowledge to younger generations within the producing area as a way to preserve it.

Operation	Objectives of the operation	STAKEHOLDERS (* Leading stakeholder	Schedule (year)					Comments
			1	2	3	4	5	
10.1.- Transmitting production and processing techniques to the young people living in the producing area	Preserving the practical knowledge and the skills linked to raisins production	(* Municipalities of the producing area Competent administration Associative Fabric and cooperatives Regulating Board of the Protected Designation of Origin "Pasas de Málaga" (Málaga raisins"						Organization of training workshops with practical experiences linked to production and manufacturing techniques.
10.2.- Strengthening the knowledge and sense of belonging to a special and valuable sector among the children of the producing area	Making children aware of the importance of this sector for the local economy	(* Relevant public administration: Regional Ministry of Education of Andalusia Associative Fabric and cooperatives						Visits from schools of the area during grapes harvest. Talks at schools for children about the system. Creation of dissemination materials for kids (puzzles, board games, etc.) to make them aware of the importance of the system.

Strategic line 3: Conserving and transmitting agricultural heritage	
Measure	11.- Conserving and transmitting cultural richness.
Current situation and challenges	<ul style="list-style-type: none"> Progressive loss of the cultural heritage and of the public goods linked to the production of raisins. Preservation of the cultural heritage with regards to the production of raisins.
Objectives	<ul style="list-style-type: none"> Continuity of traditions, festivals and customs linked to raisins. Acknowledgement of the artistic and cultural expressions related to raisins.

Operation	Objectives of the operation	STAKEHOLDERS (*) Leading stakeholder	Schedule (year)					Comments
			1	2	3	4	5	
11.1.- Promoting and conserving festivals and ludic aspects related to raisins	Promoting and disseminating traditional festivals linked to raisins	Municipalities of the producing area Relevant public administration: Regional Ministry of Culture of Andalusia (*) Associative Fabric and cooperatives						Recovering "lost" traditions such as the Noche de las candelas (The Bonfires Night), San Juan (St. John), etc Fostering local festivals linked to raisins (dances, festive venues, traditions, ...). Organisation of workshops for the recovery and transmission of dances, songs and traditions.
11.2.- Promoting and conserving the artistic and cultural manifestations related to raisins	Recovering and highlighting the cultural heritage linked to raisins.	Municipalities of the producing area Relevant public administration: Regional Ministry of Culture of Andalusia (*) Associative Fabric and cooperatives						Fostering the conservative and dissemination function of the Raisins museum. Disseminating literary or any other type of art works related to the sector (such as "La Viñuela" from Arturo Reyes). Elaboration of a publication collecting the different artistic expressions linked to raisins, highlighting where they can be seen. Actions to preserve and disseminate the specific lexicon of the area

Strategic line 3: Conserving and transmitting agricultural heritage	
Measure	12.- Administrative aspects.
Current situation and challenges	<ul style="list-style-type: none"> • Different levels of involvement of the different administrations with regards to the raisins production system. • Suitable Associative Fabric. However, creating an association devoted to the management of the GIAHS seems to be necessary. • Every association should play an active role in the development of the GIAHS, within its possibilities.
Objectives	<ul style="list-style-type: none"> • Creating administrative structures to give advise on issues related to the GIAHS. • Improving the Associative Fabric through the creation of an association devoted to the GIAHS management or any other association with specific objectives linked to the raisins production system.

Operation	Objectives of the operation	STAKEHOLDERS (* Leading stakeholder	Schedule (year)					Comments
			1	2	3	4	5	
12.1.- Creation of departments or specific offices in the local councils to support producers.	Creating a specific department/office or appoint a representative in the main municipalities to give advice on issues linked to the GIAHS.	(* Municipalities of the producing area						Creation of an area to provide technical and administrative support or appointment of a representative to give advice to any specific actor in a 'one-stop shop'. The aim is to advice farmers, tourists and also consumers on issues related to the GIAHS and raisins production. Integrating actions between cooperatives and administrations.
12.2.- Promoting the creation of associations related to the conservation of raisins producing system.	Creating an association to manage the GIAHS Fostering the creation of any other association with objectives in line with the strategic lines established in the Dynamic Action Plan.	(* Associative Fabric and cooperatives						Creation of an association devoted to the management of the GIAHS. Fostering the creation of specific associations for purposes such as tourism or fostering research.

Strategic line 4: Promoting tourism.	
Measure	13.- Tourist itineraries.
Current situation and challenges	<ul style="list-style-type: none"> The area has a vast tourism potential but there is a huge difference between coastal and inland municipalities, despite the singularity of their landscapes. It is necessary to promote and make those singularities, their culture and the existing nature attractive in inland municipalities. Nowadays, some endogenous activities are being carried out with the support of local communities. However, they need to be supported to come to a good end.
Objectives	<ul style="list-style-type: none"> Improving the tourism development of the area, including the creation of rural accommodation. Getting an environmentally sustainable development of tourism in order to allow the diversification of the economy to complement agriculture.

Operation	Objectives of the operation	STAKEHOLDERS (* Leading stakeholder	Schedule (year)					Comments
			1	2	3	4	5	
13.1.- Relaunching the Route of the Raisins by creating synergies with other routes such as the Muscatel wine route	Getting a greater impact of the Raisins Route in tourism to increase visits	Municipalities of the producing area Regulating Board of the Protected (* Designation of Origin "Pasas de Málaga" (Málaga raisins)						Redefinition of the Raisins Route by dividing it in 3 tours: Eastern area (Arenas, Competa, Sayalonga), Western area (Iznate, Moclínejo, Almachar, Borge, etc.) and Coastal area (Manilva, Casares, Estepona). Fostering wine and raisins parings, tasting of typical dishes and local gastronomy throughout the route.
13.2.- Designing new guided tourism products to be held throughout the year	Receiving tourists the whole year	Municipalities of the producing area Regulating Board of the Protected Designation of Origin "Pasas de Málaga" (Málaga raisins) (* Associative Fabric and cooperatives						It is necessary to take into account that the new products supplied should include diverse experiences: <ul style="list-style-type: none"> Including activities in key moments during raisins and wine production as well as in already consolidated fairs. Example: participating in raisins production. Promotion and creation of hiking, horse riding and gastronomic routes around the key moments of vine growing, etc. Organisation of mules riding routes in the villages of the area and in vineyards.
13.3.- Promoting the network of tourist accommodation by creating new services	Having a sufficient and high quality tourist accommodations network.	Municipalities of the producing area Competent administration (* Associative Fabric and cooperatives						Strengthening the tourism sector on rural areas through the creation of new services. Promotion of the transformation of farmhouses into tourism accommodations.
13.4.- Creating photo-tours with specific points of interest	Attracting tourism through the photographic potential of the raisins producing area	(* Municipalities of the producing area						Designation of points with special views, farmhouses, forges, etc. as places of photographic interest

Strategic line 4: Promoting tourism.	
Measure	14.- Gastronomy
Current situation and challenges	<ul style="list-style-type: none"> Raisins are mainly consumed as nuts, not taking into account their potential to be used as ingredient in dishes. People is not aware of the nutritional and gastronomic attributes of Málaga Raisins.
Objectives	<ul style="list-style-type: none"> Stimulating and fostering the gastronomic use of Málaga Raisins in home recipes and dishes, as well as in restaurants.

Operation	Objectives of the operation	STAKEHOLDERS (* Leading stakeholder	Schedule (year)					Comments
			1	2	3	4	5	
14.1.- Promoting the different dishes made with Málaga raisins in the restaurants of the area.	Raise awareness on the gastronomic attributes of raisins and Muscatel wine	(* Municipalities of the producing area Competent administration: IEAMED ⁷⁸ Associative Fabric and cooperatives						<ul style="list-style-type: none"> Promotion of alliances with prestigious restaurants and creation of a gastronomic tour within the Raisins Route. Agreement on a menu with the most typical dishes of the gastronomy of the area, aiming at getting back traditional and ancestral recipes. Creation of specific blogs with typical dishes prepared with Málaga Raisins. Creation of an award (Golden Muscatel Award) for the restaurant which has better stimulated and promoted the consumption of raisins and Muscatel wine according to the Málaga GIAHS Association. Promotion of conferences and workshops related to the use of raisins in cooking. Promoting and showcasing Muscatel products in cuisine
14.2.- Writing a book of recipes focused on raisins and Muscatel wine.	Disseminating the possibilities of using raisins as ingredient in different recipes	Competent administration (* Regulating Board of the Protected Designation of Origin "Pasas de Málaga" (Málaga raisins)						<ul style="list-style-type: none"> Dissemination of the recipes book by selling them in tourist accommodations and restaurants of the area.

⁷⁸Spanish acronym for the European Institute of Mediterranean Food. It is a centre that falls under the Regional Ministry of Agriculture, Fisheries and Rural development of Andalusia for the promotion of the Mediterranean diet. It is a centre that promotes the meeting and collaboration between the public-private sectors. It also promotes important areas such as health, gastronomy, innovation, research, information and food training.

Strategic line 4: Promoting tourism.	
Measure	15.- Involving citizens in agricultural tasks.
Current situation and challenges	<ul style="list-style-type: none"> • There is a gap between rural and urban environments about the peculiarities of the Málaga Raisin Production System in La Axarquía. • In this globalised world, there is a risk that new generations will not know or appreciate the importance of this system that has been a hallmark of the area throughout history.
Objectives	<ul style="list-style-type: none"> • Disseminating the specific characteristics of the Málaga Raisin Production System in La Axarquía and its role in the culture, traditions and history of the area to population at large..

Operation	Objectives of the operation	STAKEHOLDERS (* Leading stakeholder	Schedule (year)					Comments
			1	2	3	4	5	
15.1.- Promoting the participation in activities at key moments by organized tours	Raising awareness on the singularity of the tasks involved in the production of raisins.	Regulating Board of the Protected Designation of Origin "Pasas de Málaga" (Málaga raisins) (* Municipalities of the producing area Competent administration						The participation of people in the grapes harvest, drying process and removal from the bunches should be very controlled, and there should be a minimal training prerequisite to carry out the tasks and avoid unnecessary hazards for the participants.
15.2.- Promoting programmes to link urban and rural environments such as a programme called "adopt your vine"	Establishing links between "rural" and "urban" in order to add value to the raisins production system.	Regulating Board of the Protected Designation of Origin Málaga raisins Municipalities of the producing area (* Associative Fabric and cooperatives						Promotion of a program called "Adopt your vine", in which citizens can participate in the common tasks developed during the vine productive season and enjoy their production afterwards.
15.3.- Promoting visits of schools and other groups during harvesting, drying, removal of raisins and festivals.	Disseminating the knowledge and values of the raisins production system among school children.	Municipalities of the producing area (* Relevant public administration:						Guided tours of school children, mainly in the time of harvest, grapes drying and removal from the bunches.
	Disseminating the characteristics of the raisins production system and its links to the area among other groups of interest	Regional Ministry of Education of Andalusia Associative fabric and cooperatives						Guided tours during grapes production in order to highlight and put into context the peculiarities of the grapes and raisins system so as to raise awareness on the GIAHS philosophy.

Strategic line 5: Research and dissemination.	
Measure	16.- Research
Current situation and challenges	<ul style="list-style-type: none"> • There is little research on Muscatel grapes growing and the differential characteristics of Málaga Raisins. • Expected climate change can be an insurmountable challenge if there are no knowledge and tools to allow adaptation.
Objectives	<ul style="list-style-type: none"> • Encouraging the interest of researchers in the raisins production system developed in Málaga and its differential characteristics. • Generating knowledge related to raisins, their consumption and their effects on health.

Operation	Objectives of the operation	STAKEHOLDERS (* Leading stakeholder	Schedule (year)					Comments
			1	2	3	4	5	
16.1.- Promoting and participating in medical research	Discovering the health benefits of naturally sun-dried raisins	(* Andalusian universities and other research centres.						Promotion of the analysis of the effects that the consumption of Málaga raisins can have on health. Analysis of the potential beneficial effects of raisins consumption after sporting activities.
16.2.- Collaborating with the European Institute of Mediterranean food (Spanish acronym IEAMED) on aspects related to the Mediterranean diet.	Highlighting raisins as a product of the Mediterranean diet	Regulating Board of the Protected Designation of Origin "Pasas de Málaga" (Málaga raisins) (* IEAMED						Avoiding the underestimation of the consumption of Málaga Raisins in the Mediterranean diet
16.3.- Promoting and participating in research on the effects of climate change on grapes growing and raisins production	Identifying the effects of climate change on raisins production system	(* Relevant public administration: Regional Ministry of Agriculture, Fisheries and Rural Development of Andalusia, Regional Ministry of Environment of Andalusia. Regulating Board of the Protected Designation of Origin "Pasas de Málaga" (Málaga raisins) Local farmers						Research projects may be carried out to mitigate the possible effects of climate change on the production of raisins.
16.4.- Promoting the exchange of experiences and technology with territories where Muscatel grapes are grown	Taking advantage of the synergies resulting from the collaboration between regions where Muscatel grapes are grown	(* Regulating Board of the Protected Designation of Origin "Pasas de Málaga" (Málaga raisins) Municipalities of the producing area						<ul style="list-style-type: none"> • In Spain, depending on the year, raisins are also produced in Marina Alta in Alicante and in the adjacent area of Valencia. Muscatel wine is also produced in Chipiona. • At international level, Muscatel wine is produced in Chile and Arg. • Fostering the connection with national and international territories producing Muscatel wine in order to share techniques and actions developed in those territories.

Strategic line 5: Research and dissemination.	
Measure	17.- Conducting studies.
Current situation and challenges	<ul style="list-style-type: none"> • There is little information on the importance of the system and the existing one does not reach all levels. It is necessary that every agent involved participate actively to generate and transmit knowledge. • In order to ensure economic sustainability, conducting market studies on Málaga Raisins seems to be necessary to meet consumers' needs.
Objectives	<ul style="list-style-type: none"> • Ensuring sufficient provision of up-to-date information to the system in all its areas so as to make the appropriate decisions for the sustainability of the system.

Operation	Objectives of the operation	STAKEHOLDERS (* Leading stakeholder	Schedule (year)					Comments
			1	2	3	4	5	
17.1.- Generating information on the actors involved in the GIAHS to improve and optimise the activities developed	Generating information about the actors involved in the GIAHS so as to make decisions to improve the system.	Competent administration Andalusian universities and other research centers. Regulating Board of the Protected Designation of Origin "Pasas de Málaga" (Málaga raisins) (* GIAHS Association						<ul style="list-style-type: none"> • Conducting surveys to stakeholders (hotel owners, tourist agents, managers, guides, producers, researchers, technicians, etc.) to detect new needs to implement appropriate measures.
17.2.- Conducting market studies in relation with raisins.	Studying the current position of the product in the market and disseminating the conclusions.	Competent administration (* Andalusian universities and other research centers. Regulating Board of the Protected Designation of Origin "Pasas de Málaga" (Málaga raisins) Associative fabric and cooperatives.						<ul style="list-style-type: none"> • Conduction of consumer surveys at points of sale, on line, etc. • Studies about new product consumption trends. • Dissemination of survey results and studies.
17.3.-Promoting ethnographic and socio-economic studies related to raisins.	Studying the culture and the socio-economic aspects of the raisins sector in depth	Competent administration (* Andalusian universities and other research centers. Regulating Board of the Protected Designation of Origin "Pasas de Málaga" (Málaga raisins) Associative fabric and cooperatives.						<ul style="list-style-type: none"> • Promotion of the history of vine growing in the province of Málaga. • Elaboration and dissemination of testimonies of people related to this crop, experiences, customs, etc. • Promotion of the documents on the history of raisins and their relation with the economy and development of Málaga.

Strategic line 5: Research and dissemination.	
Measure	18.- Regarding the recognition as a GIAHS.
Current situation and challenges	<ul style="list-style-type: none"> The actors involved in the raisins production system are not aware and have little information available and accessible about this designation of the FAO and its usefulness
Objectives	<ul style="list-style-type: none"> Promoting this recognition of the FAO

Operation	Objectives of the operation	STAKEHOLDERS (* Leading stakeholder	Schedule (year)					Comments
			1	2	3	4	5	
18.1.- Disseminating the recognition as a GIAHS.	Promoting the GIAHS and the actions agreed to reach the objectives set. Interacting with other systems in order to evaluate the successful implementation of actions.	(* GIAHS Association Competent administration Associative fabric and cooperatives						Organisation of International Conferences to promote designation as GIAHS. Dissemination actions at provincial and local level on the designation as GIAHS. Participation in European programs after the designation. Collaboration with the CERVIM Research Centre ⁷⁹ . Participation in international networks with other GIAHS.
18.2.- Developing a web page.	Providing information on the actions and measures developed. This information should be constantly updated and should be the base to support them.	(* GIAHS Association Competent administration Associative fabric and cooperatives						Creation of an App related to raisins that will provide information on production, tourism, gastronomy, etc.
18.3.- Creation of the GIAHS Association that will manage the measures included in the Action Plan.	Creating an association to manage the measures and actions of the Action Plan.	(* GIAHS Association Competent administration Associative fabric and cooperatives						Creation of a management body to manage the measures of the Action Plan. All the actors involved in the system should participate in this body (Municipalities, Cooperatives, Associations, the Regulating Board, Professional Agricultural Associations, Provincial and Regional governments, etc. See Annex V Proposal to create a body to manage the GIAHS. (page 90)
18.4.- Obtaining information on the impact of the actions on the sustainability of the system.	Updating measures and actions in order to ensure the success of the action plan, in line with the results obtained.	(* GIAHS Association Competent administration Associative fabric and cooperatives						Feedback about measures of the action plan based on the information compiled from the actors involved (Operation 17.1)

⁷⁹CERVIM is an international organisation established in 1987 under the International Organisation of Vine and Wine. Since its Foundation, it ensures the interests of mountain and steep slope viticulture by conducting studies, searches or conferences and participating in all institutional and sector debates on issues related to vine growing. All the areas associated with the CERVIM have similar features, a fact that enables to speak about "heroic viticulture" as these areas have orographic conditions that do not allow the use of machines or, vineyards are located in geographic areas with high beauty and tourist character.

15 Indicators of the Dynamic Action Plan

a Strategic Line 1: Conserving and improving the productive system

MEASURE / OPERATION	DESCRIPTION	INDICATORS
Measure 1	Conserving the traditional drying floors.	
Operation 1.1	Creation of a georeferenced register of traditional drying floors and vines.	<ul style="list-style-type: none"> • Number of farms registered • Number of traditional drying floors registered
Operation 1.2	Urban protection of the traditional drying floors.	<ul style="list-style-type: none"> • Number of local councils which establish this type of protection • Number of traditional drying floors registered
Operation 1.3	Promoting the conservation of these structures.	<ul style="list-style-type: none"> • Number of workshops organized by typology
Measure 2	Conserving the means of production.	
Operation 2.1	Improving the environmental sustainability.	<ul style="list-style-type: none"> • Number of applicants for agri-environmental measures • Number of farms (consult plant nurseries?)
Operation 2.2	Conserving and improving crops.	<ul style="list-style-type: none"> • Number of consultations undertaken
Operation 2.3	Maintaining and conserving mules population.	<ul style="list-style-type: none"> • Creation • Number of partners
Measure 3	Technological improvements.	
Operation 3.1	Automating awnings.	<ul style="list-style-type: none"> • Number of projects under development. • Number of projects completed
Operation 3.2	Improving the sun-drying system.	<ul style="list-style-type: none"> • Number of projects under development. • Number of projects completed
Operation 3.3	Improving tools, agricultural machinery and farming techniques.	<ul style="list-style-type: none"> • Number of projects under development. • Number of projects completed • Number of collaboration agreements

MEASURE / OPERATION	DESCRIPTION	INDICATORS
Operation 3.4	Implementing telematic control systems during grapes production and drying	<ul style="list-style-type: none"> • Number of projects under development. • Number of projects completed
Measure 4	Actions to prevent the abandonment of vine growing.	
Operation 4.1	Promoting producers associations.	<ul style="list-style-type: none"> • Number of associations created
Operation 4.2	Promoting entrepreneurship and raisins production among young people	<ul style="list-style-type: none"> • Number of workshops organized by typology

b Strategic line 2: Improving marketing strategies

MEASURE / OPERATION	DESCRIPTION	INDICATORS
Measure 5	Promotion.	
Operation 5.1	Promotion on social networks and on those related to the location of consumers.	<ul style="list-style-type: none"> • Number of promotional activities • Number of accesses counted
Operation 5.2	Promotion in retail outlets, food fairs and sports events.	<ul style="list-style-type: none"> • Number of activities developed • Number of fairs attended
Operation 5.3	Development of promotion joint actions combining production, marketing and tourism	<ul style="list-style-type: none"> • Number of activities coordinated
Measure 6	Synergies between companies. Business collaboration	
Operation 6.1	Coordination between companies to launch generic advertising campaigns and incorporate innovation.	<ul style="list-style-type: none"> • Number of companies using the campaign
Operation 6.2	Making the most of the synergies between similar products produced in the area: oil, honey, wine, almonds, figs, etc.	<ul style="list-style-type: none"> • Number of joint presentations
Measure 7	Product diversification	
Operation 7.1	Promoting the use of new packaging formats and presentations	<ul style="list-style-type: none"> • Number of innovative products

MEASURE / OPERATION	DESCRIPTION	INDICATORS
Operation 7.2	Promoting the development of new derivative products for new sectors and market niches (ice cream, pastry, energy bars, etc.).	<ul style="list-style-type: none"> • Number of innovative products
Measure 8	New marketing approaches.	
Operation 8.1	Promoting online marketing.	<ul style="list-style-type: none"> • Number of websites with electronic commerce
Operation 8.2	Boosting marketing in specialised shops and emerging markets (organic, slow food, fair trade), along with other local products	<ul style="list-style-type: none"> • Number of initiatives carried out
Operation 8.3	Promotion of international business lines	<ul style="list-style-type: none"> • Number of studies conducted

c Strategic line 3: Conserving and transmitting agricultural heritage

MEASURE / OPERATION	DESCRIPTION	INDICATORS
Measure 9	Handicraft linked to the productive system.	
Operation 9.1	Creation of an inventory of traditional tools and utensils used for the production of raisins	<ul style="list-style-type: none"> • Completion of the inventory • Number of tools and utensils by type
Operation 9.2	Conserving tools and utensils used for raisins production	<ul style="list-style-type: none"> • Number of workshops organised
Measure 10	Conserving and transmitting the heritage used for production.	
Operation 10.1	Transmitting production and processing techniques to the young people living in the producing area	<ul style="list-style-type: none"> • Number of workshops and activities organised
Operation 10.2	Strengthening the knowledge and sense of belonging to a special and valuable sector among the children of the producing area	<ul style="list-style-type: none"> • Number of visits organised • Number of conferences and seminars organised
Measure 11	Conserving and transmitting cultural richness.	
Operation 11.1	Promoting and conserving festivals and ludic aspects related to raisins	<ul style="list-style-type: none"> • Number of workshops organised

MEASURE / OPERATION	DESCRIPTION	INDICATORS
Operation 11.2	Promoting and conserving the artistic and cultural manifestations related to raisins	<ul style="list-style-type: none"> • Number of publications
Measure 12	Administrative aspects.	
Operation 12.1	Creation of departments or specific offices in the local councils to support producers.	<ul style="list-style-type: none"> • Number of offices created • Number of consultations undertaken
Operation 12.2	Promoting the creation of associations related to the conservation of raisins producing system.	<ul style="list-style-type: none"> • Number of associations created

d Strategic line 4: Promoting tourism.

MEASURE / OPERATION	DESCRIPTION	INDICATORS
Measure 13	Tourist itineraries.	
Operation 13.1	Relaunching the Route of the Raisins by creating synergies with other routes such as the Muscatel wine route	<ul style="list-style-type: none"> • Number of visitors • Number of activities organised
Operation 13.2	Designing new guided tourism products to be held throughout the year	<ul style="list-style-type: none"> • Number of activities organised
Operation 13.3	Promoting the network of tourist accommodation by creating new services	<ul style="list-style-type: none"> • Number of tourist accommodation available • Number of overnight stays
Operation 13.4	Creating photo-tours with specific points of interest	<ul style="list-style-type: none"> • Number of points of interest created and referenced
Measure 14	Gastronomy.	
Operation 14.1	Promoting the different dishes made with Málaga raisins in the restaurants of the area.	<ul style="list-style-type: none"> • Number of blogs and webs • Number of gastronomic activities developed • Number of restaurants involved
Operation 14.2	Writing a book of recipes focused on raisins and Muscatel wine.	<ul style="list-style-type: none"> • Number of copies distributed
Measure 15	Involving citizens in agricultural tasks.	

MEASURE / OPERATION	DESCRIPTION	INDICATORS
Operation 15.1	Promoting the participation in activities at key moments by organized tours	<ul style="list-style-type: none"> • Number of activities organised
Operation 15.2	Promoting programmes to link urban and rural environments such as a programme called "adopt your vine"	<ul style="list-style-type: none"> • Launch of the program • Number of vines adopted
Operation 15.3	Promoting visits of schools and other groups during harvesting, drying, removal of raisins and festivals.	<ul style="list-style-type: none"> • Number of visits received, according to type

e Strategic line 5: Research and dissemination.

MEASURE / OPERATION	DESCRIPTION	INDICATORS
Measure 16	Research.	
Operation 16.1	Promoting and participating in medical research	<ul style="list-style-type: none"> • Number of ongoing and completed studies and investigations
Operation 16.2	Collaborating with the European Institute of Mediterranean food (Spanish acronym IEAMED) on aspects related to the Mediterranean diet.	<ul style="list-style-type: none"> • Implementation of the collaboration agreement
Operation 16.3	Promoting and participating in research on the effects of climate change on grapes growing and raisins production	<ul style="list-style-type: none"> • Number of ongoing and completed research projects
Operation 16.4	Promoting the exchange of experiences and technology with territories where Muscatel grapes are grown	<ul style="list-style-type: none"> • Number of meetings held
Measure 17	Conducting studies.	
Operation 17.1	Generating information on the actors involved in the GIAHS to improve and optimise the activities developed	<ul style="list-style-type: none"> • Number of surveys conducted
Operation 17.2	Conducting market studies in relation with raisins.	<ul style="list-style-type: none"> • Number of surveys conducted • Number of market studies conducted

MEASURE / OPERATION	DESCRIPTION	INDICATORS
Operation 17.3	Promoting ethnographic and socio-economic studies related to raisins.	<ul style="list-style-type: none"> • Number of informative activities developed • Number of studies and researches started and carried out
Measure 18	Regarding the recognition as a GIAHS.	
Operation 18.1	Disseminating the recognition as a GIAHS.	<ul style="list-style-type: none"> • Number of conferences and informative activities • Number of international meetings
Operation 18.2	Developing a web page.	<ul style="list-style-type: none"> • Number of visitors • Number of links with other complementary websites
Operation 18.3	Creation of the GIAHS Association that will manage the measures included in the Action Plan.	<ul style="list-style-type: none"> • Creation • Associated numbers
Operation 18.4	Obtaining information on the impact of the actions on the sustainability of the system.	<ul style="list-style-type: none"> • Number of operations for which changes are proposed • Number of operations modified successfully

Table 12 Indicators of the Dynamic Action Plan of Málaga Raisin Production System in La Axarquía

Table of figures

Fig. 1. Raisins producing area in La Axarquía (Málaga).....	7
Fig. 2. Traditional way of transporting grapes using “fruteros” (a kind of fruit bowl).....	10
Fig. 3. Vineyard planted using the system called “a tresbolillo”.....	11
Fig. 4. “A tresbolillo” planting system.....	11
Fig. 5. Málaga raisins.....	12
Fig. 6. Málaga raisins (left) and currants (also known as Corinth raisins) (right).....	13
Fig. 7. Location of the agroclimatic station.....	24
Fig. 8. Maximum and minimum annual temperatures; Precipitations.....	24
Fig. 9. Percentage of mildew and powdery mildew in the area of La Axarquía. RAIF.....	26
Fig. 10. Incidence of leafhoppers.....	26
Fig. 11. Drying floor with grapes exposed to the Sun.....	28
Fig. 12. Farmer developing tasks in an agricultural plot.....	31
Fig. 13. Composition of pictures by Beatriz Moreno of different artisanal tools and utensils used in vine growing and in the production of raisins.....	33
Fig. 14. Mules used during harvest.....	33
Fig. 15. Municipalities included in the Route of the Raisins.....	35
Fig. 16. Winery.....	36
Fig. 17. Scheme for the elaboration of sweet wine liquor.....	37
Fig. 18. Scheme of elaboration of naturally sweet wine.....	37
Fig. 19. Different types of wines made with raisins.....	38
Fig. 20. Vineyards landscape in winter. Plants and bushes native vegetation.....	39
Fig. 21. Carob trees in farmhouses.....	40
Fig. 22. Nesting of European Serin (Serinus Serinus) in a vineyard.....	40
Fig. 23. Chameleon.....	41
Fig. 24. Fauna living in vineyards in La Axarquía.....	41
Fig. 25. Mules used for harvest tasks. Pictures by Beatriz Moreno.....	42
Fig. 26. Muscatel vines. Picture by Beatriz Moreno.....	43
Fig. 27. Agricultural diversity: vine and olive growing.....	45
Fig. 28. Farmer planting a rootstock. Picture by Beatriz Moreno.....	46
Fig. 29. Tilling. Composition from photos by Beatriz Moreno Laboreo.....	46
Fig. 30. Pruning. Picture by Beatriz Moreno.....	47
Fig. 31. Different tools: hoe, scissors for pruning (above), axe and scissors for removing the grapes from the bunch (below).....	47
Fig. 32. Water flowing to the drains in a slope of the area. Picture by Jesús Comino.....	48

Fig. 33. Picture of a natural drain.....	48
Fig. 34. Grapes harvest using boxes. Picture by Beatriz Moreno.....	49
Fig. 35. Bunches placed in baskets.....	49
Fig. 36. Mules helping to transport grapes. Picture by Beatriz Moreno.....	50
Fig. 37. Bunches put on the drying floors and farmer extending awnings to protect grapes. Pictures by Beatriz Moreno.....	50
Fig. 38. Raisins removed from the bunch. Picture by Beatriz Moreno.....	51
Fig. 39. Examples of gastronomy.....	53
Fig. 40. Poster of the Raisins Day in El Borge.....	53
Fig. 41. Poster of the raisins festival in La Viñuela.....	54
Fig. 42. Poster of the festival dedicated to vine-growers	54
Fig. 43. Poster of the Festival of Muscatel grapes.....	55
Fig. 44. Poster of the Festival of the Ajoblanco.....	55
Fig. 45. The Muscatel Market of Almachar.....	56
Fig. 46. Poster. Livestock Fair in the municipality of Almachar.....	56
Fig. 47. Poster. Municipality of Arenas Mule Fair Cartel.....	56
Fig. 48. Poster. Fair of "San Miguel" in the Municipality of Vélez-Málaga Poster.....	57
Fig. 49. Paintings by different authors. From left to right, La pasa, El pasero and the mural Mi tierra, mis raíces.....	59
Fig. 50. Drying floor. Oil painting on linen. Author: Evaristo Guerra Zamora.....	60
Fig. 51. Monument of the grape harvester. Municipality of El Borge.....	60
Fig. 52. Raisins Museum in Almachar. Picture by Carmen Ocaña.....	61
Fig. 53. Presentation of the project for the Museum and information centre for the raisins produced in La Axarquía.....	61
Fig. 54. Tags, labels and stamps to market raisins.....	62
Fig. 55. Exhibition "Málaga raisins and decorative arts". Museum MUPAM.....	62
Fig. 56. Details of the starting point to make the planimetric divisions.....	67
Fig. 57. Simplified representation of land uses in planimetric division A.....	68
Fig. 58. Simplified representation of land uses in planimetric division B.....	68
Fig. 59. Typical landscape of La Axarquía. Picture by Beatriz Moreno.....	76
Fig. 60. Farmhouses as elements integrated in the landscape.....	78
Fig. 61. Farmhouse. Picture by María Ríos.....	79
Fig. 62. Drying floor with grapes exposed to the Sun. Picture by María Ríos.....	80
Fig. 63. Diagram of a drying floor.....	80
Fig. 64. Spring scenery. Source: Employment workshop on raisins production.....	81
Fig. 65. Summer scenery. Source: Employment workshop on raisins production.....	81

Fig. 66. Autumn scenery. Source: Employment workshop on raisins production.....	82
Fig. 67. Winter scenery. Source: Employment workshop on raisins production.....	82
Fig. 68. Management structure of the GIAHS Málaga Association.....	91
Fig. 69. Mudéjar route.....	104
Fig. 70. Avocado route.....	104
Fig. 71. Route of the sun and wine.....	104
Fig. 72. Olive oil and hills route.....	105
Fig. 73. Cover of a poems book by Salvador Rueda.....	111
Fig. 74. Area annexed to the farmhouse. Picture by María Ríos.....	128
Fig. 75. Non-law proposition to support the proposal for the designation of Málaga raisins as GIAHS. Parliament of Andalusia. Changes.....	132
Fig. 76. Support of the Regional Ministry of Agriculture, Fisheries and Rural Development of Andalusia to the proposal for the designation of Málaga raisins as GIAHS	133
Fig. 77. Letter sent by the Vice-Minister of Agriculture, Fisheries and Rural Development of Andalusia to the Spanish Ministry of Agriculture, Fisheries, Food and Environment.	135
Fig. 78. Motion passed by the Provincial government of Málaga.....	136
Fig. 79. Motion passed by the Association of municipalities of the area Costa del Sol-Axarquía.....	137
Fig. 80. Agreement of the local council of Almáchar.....	140
Fig. 81. Motion passed by the local council of Benamargosa for the designation of Málaga raisins as GIAHS.....	141
Fig. 82. Commitment of the Muscatel Association to begin with the proposal.....	143
Fig. 83. Statement of the Muscatel Association to the Regional Ministry of Agriculture, Fisheries and Rural Development of Andalusia informing about the proposal.....	146
Fig. 84. Statement of the Raisins Board to support the Muscatel Association.....	147
Fig. 85. Process followed for the preparation and submission of the proposal until the presentation of the proposal.....	154

Table of maps

Map 1. Map of the land uses of the subarea Low Axarquía.....	65
Map 2. Map of land uses of the subarea Eastern Axarquía.....	66
Map 3. Visual basins of drying floors in the whole area.....	70
Map 4. Graphical representation of the index of the average size of the patch (ASP).....	71
Map 5. Graphical representation of the index for the density of the margins (DM).....	72
Map 6. Graphical representation of the Simpson's diversity index (SDI).....	73
Map 7. Visual basins of the subarea of Low Axarquía.....	74
Map 8. Visual basins of the subarea of Eastern Axarquía.....	75
Map 9. Map of slope.....	94
Map 10. Map of the distribution of the plots dedicated to the production of raisins.....	97
Map 11. Map of the distribution of drying floors.....	98
Map 12. Map of the boundaries of the GIAHS area.....	99
Map 13. Map of the density of drying floors in the GIAHS area.....	100
Map 14. Map of the location of both GIAHS subareas: Eastern Axarquía and Low Axarquía	101
Map 15. Subarea of Low Axarquía, on the lithologic map of Andalusia.....	102
Map 16. Subarea of Eastern Axarquía, on the lithologic map of Andalusia.....	103

Index of tables

Table 1.-Nutrition values of a portion of 40 grams of Málaga raisins.....	14
Table 2.-Earliest dates of the start and end of the tasks developed in the drying floors. Source: Regulating Board.....	25
Table 3.-Some words that are still used.....	59
Table 4.-Classification of the area according to the ASP index (see Map 4.).....	69
Table 5.-Classification of the area according to the DM index (see Map 5.).....	69
Table 6.-Classification according to the SD index (see Map 6.).....	69
Table 7.-Actors involved in the different strategic lines of the Dynamic Action Plan.....	92
Table 8.-Characteristics of both subareas. Surface shown in hectares.....	96
Table 9.-Species of floristic interest.....	108
Table 10.-Lexicon associated with the production of raisins in Málaga.....	110
Table 11.-List of participants in the Technical Committee.....	150
Table 12.-Indicators of the Dynamic Action Plan of Málaga Raisin Production System in La Axarquía.....	179

BIBLIOGRAPHY

- ⁱ OIV, 2016. Table and Dried Grapes. (Available at <http://www.oiv.int/js/lib/pdfjs/web/viewer.html?file=/public/medias/5268/fao-oiv-focus-2016.pdf>) FAO, Organización Internacional de la Viña y el Vino. FAO-OIV FOCUS 2016 (p. 42 y siguientes).
- ⁱⁱ Morilla Critz, J. *La viticultura andaluza de mediados del S.XIX vista por un californiano. El viaje de Agoston Haraszthy por España en 1861*, Estudios Regionales n.º 46 (pp 301-307).
- ⁱⁱⁱ Arrebola, E. (2011). *Diseño y elaboración de un Catálogo de Productos Tradicionales Andaluces asociado a un Sistema de Información Geográfica (SIG)*, (Trabajo Profesional Fin de Carrera). ETSIAM, Universidad de Córdoba. Córdoba.
- ^{iv} Cristina, A., Santos, M. y Caldentey, P. (2006). (vols. I y II). *Catalogación y Caracterización de los Productos Típicos Agroalimentarios de Andalucía*. Málaga: Analistas Económicos de Andalucía.
- ^v Williamson, G y Carughi, A (2010), Polyphenol content and health benefits of raisins, *Nutrition Research* 30, 511–519.
- ^{vi} Wong, A, et al (2013), Raisins and Oral Health, *Journal of Food Science*, 78 (S1), A26-A29.
- ^{vii} Anderson, J and Waters, A. Raisin Consumption by Humans: Effects on Glycemia and Insulinemia and Cardiovascular Risk Factors, *Journal of Food Science*, 78 (S1), A11-A17.
- ^{viii} Consejería de Cultura, Instituto Andaluz del Patrimonio Histórico. <http://www.iaph.es/patrimonio-inmaterial-andalucia/>
- ^{ix} Justicia Segovia, A. (1988). La Axarquía malagueña y la costa oriental. Dos espacios agrarios contrapuestos. Málaga (pag 78). Referenciado en GÁMEZ LOZANO, J. (2004). Almáchar, pasado y presente de una comunidad rural de la Axarquía, Málaga (p. 146)
- ^x Gómez Moreno, M.ª L.(1989). La montaña malagueña. Estudio ambiental y evolución de su paisaje. Málaga, (p. 222), Referenciado en GÁMEZ LOZANO, J. (2004): Almáchar, pasado y presente de una comunidad rural de la Axarquía, Málaga.
- ^{xi} Justicia Segovia, A. (1988). La Axarquía malagueña y la costa oriental. Dos espacios agrarios contrapuestos. Málaga (p. 78).
- ^{xii} Jiménez Blanco, J.F. La producción agraria en Andalucía Oriental: 1874-1914. Madrid (pag 569).
- ^{xiii} Pezzi Cristóbal, P. (2003). Pasa y limón para los países del norte. Economía y fiscalidad en Vélez-Málaga. Universidad de Málaga. Málaga.
- ^{xiv} Pellejero Martínez, C. (1990). La filoxera en Málaga, una crisis del capitalismo agrario andaluz. Málaga. (pp. 49-51). Referenciado en GÁMEZ LOZANO, J. (2004). *Almáchar*, pasado y presente de una comunidad rural de la Axarquía, Málaga
- ^{xv} Mignon, C.: Campos y campesinos de Andalucía mediterránea. (p. 461)
- ^{xvi} Consejería de Agricultura, Pesca y Desarrollo Rural (2017). Programa de Desarrollo Rural de Andalucía (p. 803)
- ^{xvii} Rueda, F. (1996). La pasa. Una agricultura de tradición milenaria. Universidad Autónoma de Madrid. Facultad de Filosofía y Letras. Museo de Artes y Tradiciones Populares.

BIBLIOGRAPHY

- xviii Rodrigo Comino, J y Senciales, J. M, Ramos, M. C, Martínez-Casanovas, J. A, Lasanta, T, Brevik, E. C, Ries, J. B, Ruiz Sinoga, J. D. (2017). Understanding soil erosions processes in Mediterranean sloping vineyards (Montes de Málaga, Spain). *Geoderma*, 296, 47-59.
- xix Rodrigo Comino, J y Ruiz Sinoga, J. D, Senciales, J. M, Guerra-Merchan, A, Seeger, M, Ries, J. B. (2016). Hight variability of soil erosion and hidrological processes in Mediterranean hillslope vineyards (Montes de Málaga, Spain). *Catena*, 145, 274-284.
- xx Rodrigo Comino, J y Wirtz, S, Brevik, E. C, Ruiz Sinoga, J. D, Ries, J. B. (2017). Assessment of agri-spillways as a soil erosion protection measure in Mediterranean sloping vineyards. *Journal of Mountain Science*, *Volumen 14*(6), 1009-1022.
- xxi Gámez, J. (2004). *Almáchar, pasado y presente de una comunidad rural de la Axarquía*. Málaga: Centro de ediciones de la Diputación Provincial de Málaga.
- xxii Bravo Caro, J.J. (1995) *Felipe II y la repoblación del reino de Granada. La Taha de Comares*. Granada: (s.n.)
- xxiii Mancomunidad de Municipios Costa del Sol-Axarquía (2015). Análisis de la oferta y demanda turística de la Comarca de la Axarquía, Málaga.
- xxiv Yus Ramos, R. (2005) *Axarquía, el medio natural*. Centro de Desarrollo Rural de la Axarquía. CEDER-Axarquía. Málaga.
- xxv Cuadrado, M., Rodríguez, M. *El camaleón común (Chamaeleo chamaeleon) en Andalucía: Distribución y conservación*. Sevilla: Consejería de Cultura y Medio Ambiente (pág. 13).
- xxvi Salazar, Z. (1948) *Mulos Castellanos y Romos*. [Hojas divulgadoras n.º 18-48]. Madrid: Ministerio de Agricultura
- xxvii Rojas Clemente, S. (1807). *Ensayo sobre las variedades de vid común que vegetan en Andalucía*. (ed. facsímil (2002)). Sevilla: Consejería de Agricultura y Pesca). Madrid: Imprenta de Villalpando.
- xxviii Lacomba Avellán, J.A. (1974). *Málaga 1878: La irrupción de la filoxera*. Málaga: Centro de ediciones de la diputación de Málaga (Jábega nº5)
- xxix Pellejero Martínez, C. (1991). *La filoxera en Málaga*. Málaga: Arguval.
- xxx Ministerio de Agricultura, Pesca, Alimentación y Medio Ambiente (2016). *La filoxera*. Recuperado de http://www.mapama.gob.es/ministerio/pags/biblioteca/fondo/pdf/14985_6.pdf
- xxxi Unidad de Prospectiva de la Empresa Pública de Desarrollo Agrario y Pesquero de Andalucía (2004). *Diagnóstico del sector vitivinícola en el Marco de Málaga y Sierras de Málaga*. Sevilla: Servicio de Publicaciones y Divulgación.
- xxxii Lisón, T. (1971) *Antropología social en España*. Madrid. Cita en el texto: (Lisón, T. 1971, p. 231)
- xxxiii Domínguez Correa, L. (2017). *La Axarquía, producción de un Paisaje Cultural*. Tesis Doctoral. ETSA. Universidad de Sevilla. Sevilla.
- xxxiv Haraszthy, A. *Grape cultura, Wines and Wine-making. Whit notes upon Agriculture and Horticulture*. Harper and Brothers. New York, 1862. Cita en el texto: (Morilla Critz, J. *La viticultura andaluza de mediados del S.XIX vista por un californiano. El viaje de Agoston*

BIBLIOGRAPHY

Haraszthy por España en 1861, Estudios Regionales n.º 46 (pp 301-307).

^{xxxv} Koohafkan P. y Altieri M. (2011). *A methodological framework for the dynamic conservation of agricultural heritage systems*. Roma: The Food and Agriculture Organization (FAO) of the United Nations 2011. Land and Water Division (NRL)

^{xxxvi} Rueda, S. (1891). *Cantos de la Vendimia*. Madrid: Gran Centro Editorial.