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# **Dimensions of Sustainable Rural Systems**

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**Nederlandse Geografische Studies / Netherlands Geographical Studies**



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ISSN 0169-4839

Nederlandse Geografische Studies 244

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Utrecht/Groningen 1998

Koninklijk Nederlands Aardrijkskundig Genootschap/

Faculteit der Ruimtelijke Wetenschappen

Rijksuniversiteit Groningen

## 7 TRADITIONAL FARMS: ARE THEY SUSTAINABLE?

*Ana Firmino*

### 7.1 What is traditional?

Tradition? “Tradition is no more what it used to be” says a popular advertisement for a British brand of whisky. The same is true for the traditional farming systems, which still remain in Portugal.

With the advent of modernisation in the sixties, many traditional farms were completely transformed and lost their original characteristics. Migration in order to seek out new opportunities in other economic sectors such as industry and services forced many, specially the younger people, from rural areas to the cities along the coastline or to industrialised countries such as France or Germany. This phenomenon accelerated the process of modernisation, with machinery replacing the missing labour force as well as permitting farmers to cultivate a larger plot in less time.

This period also corresponds to a phase of ‘feminisation’ in agriculture, since men were the first to migrate, and women had to take on the responsibility for normal farm work. Traditional farming has always been based primarily on family labour. So, in a couple of decades the departure of men and young couples resulted in the ageing of rural populations, who then adapted their farms to their physical capacities and needs so that many now produce only for their own consumption.

Market demand, on the other hand, has also contributed to significant farm change. The European Union has imposed size criteria on farm produce (calibration), while the most important food suppliers prefer certain varieties, which are the most interesting for them, economically speaking. Thus, the traditional regional varieties have been replaced by more productive hybrids, which usually are much more demanding in terms of irrigation and fertilisation. Therefore, additional changes on the farms became necessary.

Some of the investments, which have been undertaken, particularly those that have benefited from European Union subsidies, such as land consolidation, tractors and earth levelling, are responsible for the most striking changes in the landscape and environment. Trees and bushes have been cut down to enlarge the plots and make machinery movement easier and terraces and contour lines have been ignored, enhancing erosion processes and loss of nutrients.

In general, Portugal is still experiencing the changes that dominated in more developed countries in the 1970s. Thus, environmental damage is not taken into account, which will sooner or later undermine the objective of making money no matter how. Curiously, the most ‘backward’ and older farmers are those who usually practise the most sustainable agriculture, because of the respect they show regarding the limits imposed by the carrying capacity of the natural resources that they utilise and because of the adaptation of their farming techniques to the environment. But, of course, they are being cast aside by the market, which demands a continuous supply of certain varieties, without any trace of

earthworms or blemishes, conditions, which are different to fulfil by a farming system which, in many respects, is close to organic farming.

## **7.2 The study area: Loures**

In the areas around the most important towns, such as the municipality of Loures (which borders Lisbon to the north)<sup>1</sup>, the impact of modernisation and urbanisation makes it even more difficult to find traditional farms.

Fourty per cent of the area of Loures (7,332 ha) is agricultural land, occupied by 1,799 farms, of which 1,583 ha are dedicated to field horticulture, corresponding to 1,113 farms. With deep rural roots, the municipality still has about 10% of its population working in agriculture but, in general, this is an older segment of the population (between 45 and 60 years old). The advance of urban sprawl and the attraction of the town for young people has had a marked impact on the reduction in the number of farms, which decreased by 38% between 1979 and 1989, associated with a reduction of 18% in farm area or a drop of 1,774 ha (Barbosa 1993).

Nevertheless this area, which in 1,887 presented the second highest production value per hectare for horticulture in the metropolitan area of Lisbon (1.8 ECUs/ha, against 2.5 ECUs/ha in Lisbon! (Peirera 1915,p. 119)), is still responsible for 40% of the vegetables and fruits sold in that town over a century later.

This situation is not only due to the proximity of Lisbon. It is mainly related to the good soils of the area (soil categories A and B), which are scarce, accounting for only 3% of the agricultural area of the whole country. It is possible to get a profit return of 25% in the Loures Valley, when on other good soils in the country (such as those of Sorraia Valley in the Coruche area) 12% is barely achievable. Consequently, three crops per year are easily achieved with onions, and the municipality also produces about 40,000 tons of fresh fruits and vegetables per year, worth approximately 35,000,000 ECUs per year.

It is not surprising that some governmental investments, such as the motorway, which crosses the valley, have been so criticised (see, for instance, Teles 1985) because this takes up 15.8 ha of A and B soils (the most productive) in a protected area (RAN - National Agricultural Reserve). This agricultural productivity also justifies the huge investment (42,500,000 ECUs) that Loures municipality is managing in order to mount an integrated attack on pollution in the hydrographical basin of the Trancão River. In two or three years, this will recuperate for agriculture soils, which have a high production potential and which have not been used for several reasons, notably salinity. At the same time, water with good quality for irrigation will be supplied.

## **7.3 Traditional versus Modern Systems**

Compared with the beginning of the century, the farming systems that are observed today in Loures differ substantially from what they used to be. Farm size is still relatively small (between 2 and 5 ha) but the way they are farmed is changing to meet market demands.



Due to the soil fertility, large amounts of fertilisers are not necessary. At the same time, cattle production for beef or milk has been decreasing, thus contributing to the lower applications of manure. On the other hand, pesticides are sometimes used excessively and misused mainly by illiterate farmers, who do not follow the most basic instructions for use, endangering their own lives and public health. Growth hormones are also being used by less scrupulous farmers, who only care about their monetary returns.

In addition, induced by national and European Community regulations (such as Reg. EC 2328/91), several incentives leading to mechanisation have contributed to the acquisition of tractors (usually involving a horsepower superior to the actual needs), animals, greenhouses and irrigation systems in a total of seventy projects (between September 1986 and December 1994). Sometimes these investments have had a severe impact on the landscape and environment, particularly regarding tractors, which are too heavy and which require the removal of hedges in order to facilitate the field manoeuvres. The adoption of some new technologies and practices has also had a negative impact on the environment through reducing natural protection against eolic erosion, eliminating terraces and not respecting the contour lines, which help control soil erosion; thus, all of this contributes to a reduction in biodiversity and creates an imbalance in the trophic chain. Specialisation in a couple of cash crops, for instance, has disrupted the traditional rotation system; sometimes, problems are not worse than they could be because farmers stop producing crops, which do not correspond to their expectations (too many diseases or imperfections).

Lastly, the pollution caused by either industrial or urban effluents, but also due partly to agriculture will be dealt with in the near future. This pollution has contributed to changes in the landscape, both visually and in terms of odours. Thirty or forty years ago, some of the older farmers used to swim and fish in the rivers where their wives washed their clothes. Today, that water is not even suitable for irrigation.

#### **7.4 Traditional farms: are they sustainable?**

The results of a preliminary inquiry that we have been carrying out in the Loures and Mafra area show that due to the diversity of criteria necessary to assess the situation, it is difficult to identify clearly who is more sustainable. In general, the most traditional farmers cause less impacts on the environment, but this depends on how 'traditional' they are. Those who are familiar with this type of farm will appreciate how subtle the differences can be. Modernisation, on the other hand, does not necessarily need to be harmful to the environment, as it is shown by some interesting associations of 'old-fashioned' methods and modern ones, particularly when two generations (father and son) work together.

As mentioned in a recent publication called *The Water and Life*, traditional farms are no longer the same (Museu Municipal de Loures 1993, p. 56). Indeed, farmers nowadays are under pressure to produce a larger volume of large and attractive fruit, even if these do not taste as good as the smaller and sometimes worm-eaten produce of the past. Farmers are confronted with the dilemma of producing more and making a great deal more money,

or remaining with the traditional methods, producing produce, which is not accepted in the market or command lower prices. This is why some farmers combine producing under the traditional system for their own consumption with producing with the new technologies for the market.

Of course, this situation is also related to consumer awareness, which in Portugal unfortunately is still easily attracted by size and seduced by low prices (although this is not always the case with mass production). This situation is also related to the definition of quality. What is more important for the consumer? Is it the so-called use value, determined by the qualities demanded by the food supplier or transformer, in order to get the best value added, or the biological value, which includes not only the nutritive value of a product but also its salubrity and its contribution to the human health, as Oliveira (1991, pp. 10-11) writes?

Unless the farmer embarks on an organic farming system and gets some recognition in terms of prices and EU subsidies<sup>2</sup> (although these have not been paid regularly and may bring other kind of problems), the traditional farmer has no hope of competing with his 'modern' colleagues. However, beyond the merit, in our opinion, of keeping the old varieties and producing products with plenty of flavour, caring at the same time for nature and landscape, the traditional farmer is making an important contribution to the European Union. He does not contribute to overproduction, nor to the accumulation of waste, since he recycles as much as possible, and is a low energy consumer. This should deserve a greater degree of recognition!

Since 1991/2, the City Hall of Loures has organised a contest to elect the best horticultural farm in the municipality. The way farms are assessed is rather subjective, since the criteria defined are not rigorously measured, although several changes have been introduced to improve the evaluation. However, those responsible for the contest argue it is more a way of increasing farmers' awareness of market demand and environmental quality than of classifying them. The criteria used are based on:

- a) productivity;
- b) product quality;
- c) product appearance;
- d) use of innovative production techniques;
- e) production of horticultural varieties not traditional in the area;
- f) general look of the farm;
- g) respect for environmental quality, particularly regarding water and the products used in fertilisation and pest control.

(derived from Regulation of the contest 'Hortas de Loures', article 2, CML (Loures City Hall))

As a reward for his role in our society, the City Hall attributes a special 'honourable mention' to the farms where "traditional farming systems have been used in order to keep the regional cultural heritage or practising organic farming" (article 3, 'Hortas de Loures', CML).

This is a classification apart, because the traditional farmer, according to the criteria



presented above, would never get a good classification in relation to criteria a, c, d and e. In the future, the mayor suggests that "horticulture as a landscape criteria should be introduced, in order to improve the appearance of municipality" (Boletim Municipal no. 122, March 1996, p. 16), revealing some aesthetic concern. But in terms of farming, there is no doubt that the general tendency is still towards 'modernisation' (i.e. more powerful tractors, higher yielding varieties, more fertilisation and irrigation, as well as all other techniques, which lead to higher productivity), particularly among young farmers.

The Loures study area has given us a better understanding of the problems, which a traditional farmer has to face, and how difficult it is for him to subsist and undertake a sustainable activity. If the surroundings are polluted, it will be more difficult for him to keep farming either without or by using only small amounts of chemicals because, as many farmers say, if they do not use pesticides the crop will be lost (people have begun to notice the imbalance in the trophic chain, but most farmers are not yet aware of the way this works and so many will use pesticides more intensively).

On the other hand, if the production from traditional farms is not marketable, farmers will be tempted to use all sorts of fertilisers and shift into more productive varieties to make money. Thus, although traditional farms in general are more close to sustainability than conventional ones, they are condemned to disappear unless:

1. consumers' awareness for quality as a synonym of health increases;
2. governmental policies consider sustainable systems of farming as a priority for the environment, public health and the landscape;
3. farmers get more information and technical support to adapt their activity to more sustainable farming systems;
4. professionals are prepared to review their knowledge base and the scope of their intervention.

Some programs are already being implemented from this perspective, such as LEADER, which among other purposes supports the production of regional varieties of produce and rural tourism, an activity very much dependent on a clean environment and well kept landscapes.

The agri-environmental measures are also intended to move development in a more sustainable direction. As Alves (1996,p. 94) writes "although it can be foreseen that the conventional agricultures will focus more and more on sustainable principles and practices (since the environment demands it), which will prevent some of the most serious effects on the environment and overexploitation of natural resources ... the process will always be gradual and typically a slow process". Thus, before the effects of changes in policies and attitudes become perceptible to most people, many 'sustainable' farms will have already disappeared in the name of progress and modernisation!



## Notes

1. We have been studying the contribution of farmers to the environment and landscape in the municipality of Loures by applying the criteria and parameters defined in "The landscape and nature production capacity of organic/sustainable types of agriculture", a EU concerted action co-ordinated by Jan Diek van Mansvelt, Department of Ecological Agriculture, Agricultural University Wageningen, Holland.
2. This is supposedly what underlay the sudden rise from around 100 up to 325 organic farmers between 1994 and 1995.

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ISSN 0169-4839