

Sheep farming as an alternative to olive growing

Idda L.

in

Allaya M. (ed.).
L'économie de l'olivier

Paris : CIHEAM

Options Méditerranéennes : Série Etudes; n. 1988-V

1988

pages 209-213

Article available on line / Article disponible en ligne à l'adresse :

<http://om.ciheam.org/article.php?IDPDF=CI010910>

To cite this article / Pour citer cet article

Idda L. **Sheep farming as an alternative to olive growing**. In : Allaya M. (ed.). *L'économie de l'olivier*. Paris : CIHEAM, 1988. p. 209-213 (Options Méditerranéennes : Série Etudes; n. 1988-V)



<http://www.ciheam.org/>

<http://om.ciheam.org/>

Sheep farming as an alternative to olive growing

Lorenzo IDDA

Istituto di Economia e Politica Agraria - Sassari - Italy

The Mediterranean is the main production area for olive oil with the highest percentage of world production. From 1982 to 1984 this amounted to 94%, which in real terms meant that of the 19 million quintals produced in the world, 18 million were obtained from this area.

Of the Mediterranean countries, Italy produces 33%, followed by Spain with 31% and lastly by Greece with 16%. Of the countries outside the EEC, the main producers are Turkey with 7% and Tunisia with 6%. These values refer to the quantities produced from 1982 to 1984. The ratio between the production percentage composition of each country in the Mediterranean area and the percentage composition for the number of olive trees in each country is of particular interest. It appears that Spain, with a higher percentage of olive trees than Italy (27% versus 25%), is second as far as production is concerned. This indicates a lower productivity per plant in Spain than in Italy, which can generally be extended to all countries outside the EEC. In fact, the ratio between the production percentage and the percentage of the number of olive trees for each country is higher than one in the EEC countries mentioned above but lower than one in Turkey, Tunisia and in all the remaining producer countries in general.

EEC countries and non-EEC countries are further differentiated by annual variations in production. With regard to what one might call a "standard"

variation affecting all producers, this appears to be much higher in non-EEC countries where the indexes of production variability calculated over the last ten years gave 53 points for Tunisia, 42 points for Turkey, and 47 points for Morocco compared to average EEC values of 25-30 points.

As far as international trade and relevant values are concerned, i.e., values which provide insight into the demand for olive oil, Italy is the only Mediterranean producer mentioned above with a negative average import-export balance over the 1982-1984 period (amounting to \$121 million). Negative balances were also recorded in Libya (more than \$78 million) and France (more than \$19 million). As far as net exporting countries are concerned, Greece holds the first place with a surplus of more than \$150 million followed by Spain and Tunisia with \$75 million and \$70 million respectively. The active role of Italy as a country which is both a producer and consumer is related to eating habits (which are also to be found in other countries such as Greece and Spain) and to intense processing activities as olive oil is an intermediate ingredient in a high number of foodstuffs.

This does not, however, diminish the great difficulties encountered in the sale of olive oil on the international market. Problems connected with surplus supplies can no doubt be considered as the primary cause, but ever-increasing competition from substitutes, such as seed oil,

margarine and other similar products, plays a crucial role in making the marketing of olive oil particularly difficult, especially over the last few years.

Given this general condition of the market, noticeable differences are encountered when the situations of individual countries are analysed. Due to factors resulting from commercial and fiscal policies relating to olive oil, the product is sometimes favoured and sometimes not. In any case, at least for EEC countries, unfavourable conditions should gradually disappear. This paper will not discuss the major problems of olive growing in the Mediterranean region as they have already been discussed in detail elsewhere. Instead, it will discuss some aspects of a possible alternative -- sheep farming.

As with olive oil production, sheep farming is generally found in areas with rather unfavourable environmental conditions due not only to natural factors but also to infrastructural and structural measures. This is particularly true in Mediterranean countries and is the reason why both these economic activities have in the past performed and continue to perform the essential function of valorizing these areas by generating income and improving social conditions which could otherwise be achieved only with great difficulty.

At present, the total number of sheep in the world amounts to about 1.5 billion head with about 140 million in Mediterranean countries (Tables 1 and 2). In the context of a continuing crisis in the olive oil market, it thus might appear as almost natural to introduce sheep farming as an alternative activity in olive production areas. It is not so simple, however, as there are certain physical, human and economic obstacles to overcome.

The physical environment, which often consists of marginal areas, is an obstacle to the extent that large scale sheep farming for meat requires considerable feed resources. This is not the case for the milk producing rustic breeds that are more adapted to marginal conditions. The breeding of such herds, however, requires farmers that are more qualified, involving longer professional and technical training apart from a market capable of absorbing increased cheese production at remunerative prices.

In order to clarify these problems and to provide a better evaluation of sheep farming for milk as an

alternative to olive oil production, a brief analysis follows on farm structures, production, processing and the state of the market of sheep farming products in the Sardinian region of Italy. It was chosen for this example because its physical environment is generally representative of most Mediterranean areas currently involved in olive oil production.

About three million head of sheep (more than one third of the total number in Italy) are now bred in Sardinia. They are very rustic sheep of a local breed capable of adapting easily to variations in feed availability and they have a singular ability to produce milk. Farming takes place in natural pastures with moderate amounts of concentrated fodder being provided during difficult periods of the production season.

The total average production breakdown is as follows: 70% milk, 29% meat (suckling lambs slaughtered at 7-9 kg) and 1% wool. The milk production per lactating ewe varies from 100-140 litres per lactating cycle.

Almost all of the milk is used for cheese production which relies on technologically advanced equipment operated partly by private companies and partly by co-operatives. There are 40 private processing plants and 45 co-operative factories in the region producing 54% and 41% respectively of the total output. The total production of cheese in 1984 was 372,000 quintals and this is increasing due to a continued growth in both the per head and total herd milk production.

Table 2 shows the production of cheese from sheep milk during the 1979-1984 period according to basic types of cheese. As can be seen, more than 50% of the total production consists of *pecorino romano* cheese (a hard, salty cheese used for grating) and about 45% of other cheeses (hard and soft, mainly table cheeses).

About 70-80,000 quintals of the first type of cheese are absorbed by the American market and the rest by the Italian market. The cheeses in the second category are almost all consumed domestically.

It should be noted at this point (particularly with regard to the possibility of substituting sheep farming for olive oil production) that the amount of cheese from sheep milk produced in Sardinia kept up with the steady demand (with consistently satisfactory prices) only while the supply and demand was around 300,000 quintals. When this

threshold was passed in 1983, however, it marked the beginning of a crisis in the production of this kind of cheese which has obviously affected the whole sheep farming sector. In fact, since both Italian and foreign demand have levelled off, the surplus production has not been sold and cheese prices have been steadily falling. This has resulted in lower milk prices and thus lower incomes for farmers.

This crisis is due, in fact, more to the increased production of *pecorino romano* cheese (for which there is a rigid demand in terms of price and income) than from the increased production of sheep's milk table cheese, which has greater elasticity of demand.

In order to modify this situation, productive growth rates must be directed towards table cheese (soft, semi-hard, hard). At the same time, there must be greater marketing efforts to show clearly the particular qualities of sheep's milk cheese compared to cow's milk cheese.

Given the presumed shift in consumption from seed oil to olive oil (even if the price ratio remains unchanged) and the heaviness of the cheese market (even for sheep's milk cheese) where

demand at given price levels may increase profitably in the medium and long term only through major investments in marketing policies and product quality, it would seem that the substitution of sheep's milk products (especially cheese) for olive oil production may not be realistic in areas where innovations to reduce production costs or increase production levels of olive oil appear to be possible. Such substitutions, however, would appear to be feasible in all marginal olive growing areas.

In both cases, the economic value of olive plantations for the protection and defence of the environment needs to be taken into account. Given such economic and social value (more often than not fairly steady), the possible substitution of sheep farming production for olive oil production appears for the moment to be highly problematic. Its assessment involves various important elements: income levels, occupational levels, marketing problems, environmental policies and the regional economy.

Full detailed research on all of these aspects would provide a valuable contribution of comprehensive information in order to make appropriate conclusions regarding future agricultural policies.

**Table 1: Sheep farming in European countries
(millions of head)**

| | 1974/76 | 1982 | 1983 | 1984 |
|------------|---------|--------|--------|--------|
| Spain | 16,103 | 16,456 | 16,755 | 16,600 |
| France | 10,582 | 12,980 | 12,061 | 12,260 |
| Italy | 7,985 | 9,051 | 9,257 | 9,228 |
| Greece | 8,334 | 8,316 | 8,400 | 8,500 |
| Yugoslavia | 7,953 | 7,398 | 7,452 | 7,458 |
| Portugal | 3,924 | 4,780 | 5,000 | 5,000 |
| Turkey | 40,666 | 49,598 | 49,636 | 48,707 |
| Morocco | 15,023 | 10,155 | 11,000 | 12,000 |
| Algeria | 9,266 | 14,110 | 14,500 | 14,700 |
| Tunisia | 5,726 | 5,105 | 5,190 | 5,230 |
| Libya | 4,039 | 4,800 | 4,800 | 4,800 |
| Egypt | 1,923 | 1,394 | 1,420 | 1,450 |
| Israel | 0,200 | 0,240 | 0,240 | 0,240 |

Table 2: Sheep's milk cheese production in Sardinia (quintals as curd*)

| Year | Pecorino romano | | | Other sheep's cheeses | | | Total | | |
|------|-----------------|------|------|-----------------------|------|------|---------|--------|-----|
| | (Ass.) | N.I. | % | (Ass.) | N.I. | (%) | (Ass.) | (N.I.) | % |
| 1979 | 125 000 | 100 | 53.0 | 111 000 | 100 | 47.0 | 236 000 | 100 | 100 |
| 1980 | 154 000 | 123 | 57.3 | 115 000 | 104 | 42.7 | 269 000 | 114 | 100 |
| 1981 | 113 000 | 90 | 47.7 | 124 000 | 112 | 52.3 | 237 000 | 100 | 100 |
| 1982 | 160 000 | 128 | 52.5 | 145 000 | 131 | 47.5 | 305 000 | 129 | 100 |
| 1983 | 195 000 | 156 | 55.7 | 155 000 | 140 | 44.3 | 350 000 | 148 | 100 |
| 1984 | 206 000 | 165 | 55.4 | 166 000 | 150 | 44.6 | 372 000 | 158 | 100 |

* Curd cheese is weighed 24 hours after processing

Source: Autonomous Sardinian Region

The production data given for 1984 are based on estimates