

Technical and economic constraints in organic suckler sheep farming in France

Analysis in a group of farms

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Abstract – The structures and the technical and economic results of 12 farms practising organic farming (Org) (eight upland and four lowland) were compared with those of 25 conventional farms (Conv) (14 and 11), over three years (2002-2004). The Org farms had smaller structures, fewer workers, and lower numerical productivity, especially in uplands (-16 % on average over three years) owing to lower flock intensification and sometimes because of sanitary problems. The key questions were above all economic with (i) the high cost of concentrates, the consumption of which remained high (extra cost per kg from 40 % to 60 % in 2004), and (ii) steadily decreasing average premium on meat price; only 9 % in uplands and 2 % in lowlands in 2004. Hence the gross margin per ewe was 20 % to 23 % lower on average over three years, than that on Conv farms. The impact on earnings was marked. Income is also strongly dependent on public subsidies, which are set to diminish¹

INTRODUCTION

After a marked increase between 1997 and 2002, the growth of organic farming in France has levelled off, with even a slight reduction of farm area between 2003 and 2004 (-3 %). The problem for the farmers is above all an economic one; for ruminant husbandry, and particularly for suckler sheep, only a small part of the production is sold as organic, and prices are constantly falling. Here we highlight the economic and technical factors that account for these difficulties. For this purpose, we compare, in a three-year study, organic farms (Org) and conventional farms (Conv), in uplands and lowlands, in the centre of France (North Massif Central).

MATERIALS AND METHODS

Technical and economic surveys were conducted in 12 Org farms (eight upland and four lowland) and 25 Conv farms (14 upland and 11 lowland), on a constant sample in the years 2002, 2003 and 2004. We note that the year 2003 was very dry; the consequences were different in Org and Conv farms. Of the upland Org farms, three belonged to schools and one to the INRA research centre. The latter was not representative of private farms in terms of size. For these four farms, it was not meaningful to assess structural cost and net income.

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RESULTS (TABLE 1)

In 2004, the Org farms had smaller flocks than Conv, especially in uplands with flocks half the size: 258 ewes (280 without INRA) vs 529. The farm area was 29 % smaller (-23 % without INRA) and the stocking rate 18 % lower. In lowlands, the situation was a little different: although the area was 46 % smaller, the flocks had only 32 % fewer ewes because some Conv farmers also had cattle and had more crops for sale (% Main Fodder Area/Total Area 75 % vs 87 % in Org, in 2004). In addition, the stocking rate was 17 % higher on Org, which may be surprising at first sight, but is explained first by the somewhat different pedoclimatic context, and second by the special effort made by the Org farmers to grow grass (regular re-sowing of artificial pastures) and possibly, in Conv farms, by the priority use of the better lands for crops. We note that between the years 2003 and 2004, the proportion of main fodder area in the Org farms rose from 89 % to 93 % in uplands (while the stocking rate fell from 0.98 to 0.88) after the severe shortage of forage in the very dry year 2003, and because of the need to replenish forage stores. Org farmers couldn't purchase so much external feed, as their price was very high (+70 % in 2003 vs Conv).

However, with fewer workers on the farms (-36 % in uplands and -20 % in lowlands), the difference in labour productivity was finally not very significant on average over 3 years: -7 % in uplands (except INRA) and -10 % in lowlands.

On average over three years, the flock performance was a little lower in Org: -16 % of numerical

Table 1: Structures and flock results of farms (lowland and upland, organic and conventional, 2004).

Groups (n) Constant sample	Upland		Lowland	
	Org(8)	Conv(14)	Org(4)	Conv(11)
Structures				
Total area (ha)	58	82	74	136
forage area/total area (%)	93	96	87	75
Workers	1.1	1.7	1.2	1.5
Number of ewes	258	529	363	533
Stocking rate (LU/ha)	0.88	1.07	1.15	0.98
Flock results and gross margin				
Numerical productivity (%)	130	152	118	125
Concentrates kg/ewe	147	150	119	141
Price of concentrate (€/kg)	0.29	0.21	0.28	0.17
Lamb weight (kg carcass)	16.5	17.0	18.9	18.5
Carcass price (€/kg)	5.17	4.74	5.47	5.36
Veterinary costs (€ /ewe)	3.1	4.2	6.3	6.6
Minerals, vitamins...(€/ewe)	1.7	2.7	9.4	1.8
Gross margin (€/ewe)	65	93	79	89

productivity in uplands (125 vs 148 for Conv) and -8 % in lowlands (116 vs 127). In uplands, Conv often practised the "accelerated" system of 3 lambings over 2 years, requiring abundant use of concentrates. Heterogeneity was high in AB for this criteria, some farmers obtaining a very low level of productivity, in relation with poor sanitary control.

The consumption of concentrates also had a determining effect in Org, in view of their cost, which reached +54 % in uplands compared with Conv, and +75 % in lowlands, on average over 3 years. In uplands, the consumption was not better controlled against Conv (-15 %), taking into account the lower level of numerical productivity (-16 %); the lambs were very seldom fattened with grass. In lowlands, savings were noteworthy (-16 % of concentrates for -8 % of numerical productivity). The other two most significant production costs were the veterinary costs, 27 % lower in uplands and 16 % lower in lowlands in Org, and minerals, vitamins and phytotherapeutic products, 39 % lower in uplands (1.8 €/ewe vs 2.6) but very high in lowlands in Org farms (9.3 €/ewe vs 1.7 in Conv), which raises questions about their use.

Unfortunately, the selling prices of the lambs did not compensate for the lower productivity level and the high cost of the concentrates. The average premium (only some of the lambs being marketed in Org) was only 9 % in uplands and 2 % in lowlands in 2004, the Conv lambs being sold at relatively good prices (4.74 €/kg in uplands and 5.36 in lowlands).

Finally, *the gross margin per ewe*, which is a determining factor in the net income, is definitely lower in Org: -23 % in uplands and -20 % in lowlands, on average over three years.

For Org farms, the net income per worker could be expressed reliably only for three farms in uplands and two in lowlands. In 2004 and in uplands it reached 18,000 €/worker vs 22,000 in Conv farms and in uplands 25,000 €/worker vs 30,400, that is to say -18 % in both cases. Whereas in uplands the net income increased by 10 % from 2002 to 2004 for Conv (and 15 % in lowlands), it dropped by 38 % in upland Org (and 22 % in lowland Org). In particular, the net income of the farms in Org was strongly dependent on government subsidies. For five Org farms in uplands in 2004, they accounted for 190 % of the net income, and without the agro-environmental subsidies, primarily granted for conversion into Org, the net income would fall by 66 % to 5400 €/worker, and would be negative in three farms.

DISCUSSION – CONCLUSION

Org sheep suckler farms are subject to the same economic rules and factors of profitability as conventional farms (Hovi et al., 2003). On the other hand, some factors are more heavily weighted, in particular feeding costs (concentrates), which are very high, and strongly disfavour the upland farms.

When livestock management is controlled, with a high enough numerical productivity, the aim is then to maximize fodder self-sufficiency (proportion of the needs of the flock met by forage produced on the farm).

The nitrogen content of fodder (particularly the stored fodder), which is closely related to the legume content, appears to be a determining element for the economic results (Doyle et al. 2004). Lastly, down-adjustment of the stocking rate can also help to improve fodder self-sufficiency (Benoit et al. 2003, 2005).

Another way might be to increase the proportion of lambing in spring, but the needs of the market causes farmers to favour lambing in autumn, the possibility of selling the lambs as Org then being higher. Despite the non-use of hormonal treatments, the proportion of lambing in autumn was comparable between Org and Conv (Laignel, 2004).

The central question remains the level of the premium price on the meat (including the proportion of the lambs sold as Org). This price fell from 30 % to 9 % over 5 years in uplands and from 24 % to 2 % in lowlands. The premium price ensuring a net income comparable to Conv was estimated at 18 % for a typical upland system, with the same land, to compensate for the extra costs incurred: feeding, lower stocking rate, and cost of certification (Benoit et al. 2003). To preserve a significant premium, some farmers choose direct sale or in a short chain; however, this cannot be generalized and can require significant reorganization of farm management.

The agri-environmental subsidies given to Org farmers are either subsidies to convert to Org, which will end in one or two years, or traditional contracts that will be renewed under less favourable conditions.

Also, the economic context to come will be problematic for these farmers. A subsidy for maintenance in Org might at least make it possible to slow the trend to abandon this kind of production that has started in particular in uplands.

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