PRODUCTION COSTS ACROSS THE EU IN 2006

Catherine Gerrard and Susanne Padel

We have recently been involved in an EU project which is looking at farm accountancy cost estimation, the FACEPA (Farm Accountancy Cost Estimation and Policy Analysis of European Agriculture) project. Our part of this project was a relatively small section but very interesting as it involved looking at costs of production for a variety of organic products across several EU countries. The main products considered were milk, wheat and potatoes and the countries were UK, Denmark, Sweden, Poland, France, Italy, and Netherlands. The data were obtained for the year 2006 and all currencies were converted to Euros for ease of comparison.

Tables 1, 2 and 3 show the data for each of the three products (milk, wheat and potatoes respectively). These show that feed costs vary between 4.34 Euro cents per litre in Poland and 17.5 Euro cents per litre in Denmark with the UK in the lower half with 7.5 which is reflected in the total variable costs for milk production. Of the countries compared, the UK has the highest yields for wheat production and the second lowest direct costs after Poland. Also potato yields are highest in the UK but the direct costs are also second highest in total. There are two main lessons to be learnt from these tables and from our data collection over the last few months.

Variation between countries

Costs vary considerably between the countries and this could be a result of the nature of the agriculture and the economy of the country involved.

In both France and Italy the agriculture is highly regionalised with large variations across the country. Indeed in Italy the milk yields found in a literature review carried out by a visiting researcher in the summer (Dr Francesca Alberti from Ancona University) varied from 2751kg per year to 8524kg per year (Salvadori del Prato, 2007). Also costs in one area of Italy can be very different from those in another.

In Poland, costs in general are low compared with other countries and the costs of seeds are particularly low because organic seeds are not available and therefore the farmers are allowed to buy conventional seed. Poland looks like an extremely attractive place to farm if we look at costs alone, but costs of living are not factored in. Polish dairy farms may be difficult to compare with the UK as in 2006 the average number of dairy cows in Poland was just 6.5 compared with 126 in the UK.

There can also be variation from country to country depending on environmental, economic or agricultural conditions in specific countries in a particular year. For instance in France in 2007 the potato crops were badly affected by blight (Euvrard, 2010) and so yields were low and costs of crop protection high making comparison of costs with other countries not affected very difficult. Data for 2006 – the same year as used in the other countries were not available.

With the exception of Poland, seed costs for wheat were similar, but fertiliser and soil improvement costs varied considerably and the costings provided to us are not detailed enough to understand why.

Data collection and classification

The second lesson is that different countries collect and classify their data in different ways so that comparison can be difficult, if not impossible. This is particularly true for indirect costs (such as electricity, fuel use, machinery maintenance and depreciation) at enterprise level. Such costs are notoriously difficult to allocate to a specific enterprise, so different ways to do this exist (e.g. based on average use per hectare, on livestock units, on farmer estimates etc). We did not have indirect cost data for all of the countries for organic enterprises and in those countries where we did they may not have been allocated to the enterprises in same way, and so the data are not strictly comparable.

Many countries include a calculated "family labour" cost in their overall labour cost, where in the UK this is kept separate as an "imputed cost" and in other countries it may be ignored completely. Denmark and France summarise labour and machinery costs in one category, so the data has now been summed up in the table for wheat in the same way. Table 2 shows higher costs per hectare than in the UK for machinery and labour in Denmark, but lower costs in France and Sweden.

Discussion and conclusions

All of this makes comparison across countries extremely difficult. In the future it would be very useful to researchers and farmers if standardised data collection for enterprise data would be used across Europe. However, it can be interesting to compare the data and see what we can learn about the situation in other countries from these data. As the FACEPA project continues these data will be analysed further and a next step of the project will be looking at analysing of the role of the structure of, and the political environment for, the organic farming sector in view of the estimation results for production costs in organic farms. This will include further analysis of how the structure and characteristics of the organic sector relate to production costs: (e.g. specialised vs. diversified; agglomeration vs. sparse organic sector; importance of direct marketing vs. wholesale market oriented) and analysing the relation between the provision of ecosystem services, based on a set of environmental indicators, and production costs. Hopefully this analysis will provide further insights into the factors underlying production costs of organic farming.

Further information on the FACEPA project can be found on its web page at http://www2.ekon.slu.se/facepa/index.html.

References:

Euvrard, Robin, "La Pomme de terre biologique de plein champ: entre diversite de systemes et performances technico-economiques" presente par Robin Euvrard, maitres de stages Jean-Francois Garnier & Delphine Bouttet. Part of the Arvalis Institut du Vegetal's Project CASDAR.

Salvadori del Prato, Difficile quadrare i conti quando il latte e' biologico. Terra e Vita n 5/2007, http://www.ilgranoduro.it/osservatorio_filiera.aspx?num=4

Acknowledgements:

These data were provided by a large number of people and therefore thanks must go to:

UK: FBS Simon Moakes for providing FBS data; **Denmark**: Lizzie Melby Jespersen of ICROFS, Karen Jorgensen and colleagues at Videncentret for Landsbrog, Danish Statbank; **Sweden**: Thorsten Pedersen and colleagues at Jordbruksverket; **Netherlands**: Robert Stokkers and colleagues at LEI, Walter van Everdingen and colleagues at WUR, Jan de Wit of the Louis Bolk Institute, Izak Vermeij of WUR, Pieter van Reeuwijk of Praktijkonderzoek Plant & Omgeving – Wageningen UR; **Poland**: Sylwia Zakowska-Biemans, Lech Goraj (who provided the FADN data); **France**: Natacha Sautereau of INRA, "Resultats economiques des exploitations en AB" by Jean-Marie Morin, Institut de l'elevage, Chambres D'Agriculture (Maine et Loire, Bretagnes, Normandie, Seine et Marne, Drome), Jean Francios Garnier of Arvalis Institut du Vegetal; **Italy**: Francesca Alberti, Polytechnic University of Marche (who was a research visitor to the ORC for a month this summer).

Table1: Milk production cost data for various countries for the year 2006

Country	UK	Denmark	Sweden	Poland	France	Italy (Firenze)	Netherlands
Source	Farm Business Survey	Videncentral for Landbrug	Jordbruksverket	FADN data	institut de l'elevage	Chiorri et al.	LEI
Dairy yield kg/cow	5283	7200	8000	3341	4762		6130
Total Feed	**374**	**1081**	**901**	**145**	**262**	654*	**489**
Feed €cents/litre	7.08	15.01	11.26	4.34	5.50		7.98
Veterinary costs	37	161	133	20	24		108
other livestock costs	155		78	95	85	30	168
Total direct costs	**566**	**1242**	**1113**	**261**	**371**	**684**	**765**
Direct costs in cents/litre	10.71	17.25	13.91	7.81	7.79		12.48
Fuel	51		25	57	49	110	
Other energy	25		61	14			147
Interest	37		37		54		792
Contract Work	119			23	26	80	154
Other miscellaneous	117		150	223	166	780	411
Labour	387		908	14	184	1395	956
Depreciation machinery	101				203		
Depreciation buildings	45				118		468

*Includes veterinary costs

Table 2: Wheat production cost data for various countries for the year 2006

Country	**England & Wales**	**Denmark**	**Sweden**	**Poland**	**France** (Drome et Ardeche)	**Italy (Sicily)**
Source	Farm Business Survey	"budgetkalkuler 2006",Landsbroginfo	Jordbruksverket	FADN data	Chambre d'Agriculture de la Drome.	http://www.ilgranoduro.it/osservatorio_filiera.aspx?num=4
Yield (t/ha_	5	3.7	2.5	2.56	5.5	2.5
Costs (€/ha)	**Per ha**	**Per ha**	**Per ha**	**Per ha**	**Per ha**	**Per ha**
Seeds	82	78	84	23	80	83
Fertiliser and soil improvement	9	75	140	7	310	42-53
Crop Protection	1					
Total direct costs	**92**	**153**	**225**	**30**	**390**	**135**
Irrigation					40	
Other Energy	7			8		
Machinery & labour	639	794	344	70	331	
Other costs	76		72	114		340
Interest	35		19			12

Table 3: Potato production cost data for various countries for the year 2006

Country	**UK**	**Denmark**	**Sweden**	**Poland**
Source	Farm Business Survey	"budgetkalkuler 2006", Landsbroginfo	Jordbruksverket	FADN data
Yield t/ha	27	20	14.4	9.1
Costs	per ha	per ha	per ha	per ha
Seeds	1328	841	1738	311
Pre-sprouting			130	
Fertiliser and soil improvement	91	75	180	20
Crop Protection	96		108	
Total direct costs	**1515**	**916**	**2156**	**330**
Other Energy	31			46
Other costs	424		2066	635
Interest	62		73	
Machinery & labour	5275	2656	654	525