Gwell Cysylltiadau Busnes Organig

BOBL

Better Organic Business Links

Improving efficiency in Welsh organic agriculture through costs of production benchmarking and assessing longer term supply trends.

BOBL Livestock enterprise benchmark report.

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Better Organic Business Links – Gwell Cysylltiadau Busnes Organig

Organic Centre Wales has secured nearly £2 million for The Better Organic Business Links (BOBL) project, to deliver sustainable growth to the Welsh organic sector over three years: 2009-2012.

Opportunity to promote sustainability

The BOBL project gives the organic sector in Wales a unique opportunity to:

- Develop new, emerging and existing markets for organic produce.
- Innovate in farming, processing and product development.
- Promote sustainable practices on farms, in abattoirs, in cutting rooms and kitchens and along the food chain.
- Raise market awareness among producers and increase sales across the range of outlets.

Tackling all parts of the supply chain

The BOBL project is working in partnership with a range of specialist providers to deliver these opportunities by focusing on:

1. Driving innovation through trials and research.
2. Supporting market development opportunities such as agri-tourism and supply chain efficiency programmes.
3. Disseminating up to date market intelligence, by commissioning detailed, focused consumer attitude surveys.
4. Addressing key structural problems within the sector, such as imbalances in organic horticulture supply and demand, and the availability of organic pullets.
5. Cross cutting issues: Sustainable Food Communities and Secure Alternative Markets.
6. Running an integrated communications campaign to help the sector deliver clear messages about the benefits of organic food and farming.

By strengthening the sector at all points along the supply chain, the project aims to leave a legacy of a more robust, responsive and sustainable organic industry in Wales.

The project is funded under the Rural Development Plan for Wales 2007-2013, which in turn is funded by the Welsh Assembly Government and the European Agricultural Fund for Rural Development.

For further information on the project please see:
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Or contact The BOBL Project, c/o Organic Centre Wales. Phone 01970 622248

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Organic variable costs are often lower than conventional due to a lower level of input usage, although fixed costs, which may be similar per farm or unit land area, are often higher per unit of production due to lower physical production over which to spread these costs. Although the total costs of production can be higher on organic systems, these are usually off-set by higher levels of support payments.

In most cases, the combination of higher prices and reduced costs for organic can compensate to generate a higher net margin (or at least a reduced loss) per kg, although this is not the case for lamb. Ironically, where net margins are negative, as is often the case for beef and lamb production, the lower stocking rates for organic producers work to their advantage to generate lower losses per ha. This also applies with the value of the family's own resources used and support payments are taken into account.

1 Introduction

Identifying the costs of production for key Welsh organic farm outputs of lamb, beef and milk is critical as a first step in improving farm performance within the sector. As with mainstream agricultural sectors there is a large range in financial performance between the best and worst performers and it is only through identification of strengths and weaknesses that a farm can identify key areas for improvement. Additionally, recent changes in the CAP will affect all farm businesses including the organic sector. To ensure consistency of product supply, actors within the organic supply chain are keen to understand the effects of these changes and how this may affect supply of key products.

Whilst the Welsh Farm Business Survey (FBS) data can be used to identify costs and overall farm economic performance, the sample sizes for organic farms are very small and often below a level that provides reliable and publishable results (>5 farms). In addition, the Farm Business Survey does not normally collect livestock weight data, which is needed to estimate costs of production per kg of product. Therefore, additional data has been collected on livestock transfer and slaughter waits for both organic and non-organic farms.

This reports outlines costs of production for key Welsh organic sector livestock outputs, including identification of strengths and weaknesses and where the greatest potential gains can be made.

1 Methods and data availability

Farm financial data are collected through the Farm Business Survey (FBS) in Wales for dairy, beef and sheep systems, but these do not normally include the sale/transfer weights needed to calculate costs of production for beef and lamb. Supplementary transfer and slaughter weight data were collected for organic and non-organic farms in Wales. For beef and sheep, the Welsh samples were small but still greater than five holdings, so the data can be used but should be interpreted with caution. In the case of the dairy farms, the Welsh organic sample consisted of only three holdings, so a sample including English organic dairy farms has been used. It was not possible to include English data for beef and sheep farms as the livestock weight data was not collected.

The organic results are compared with conventional farm data. These represent the results for all farms for which costs of production data were collected. The cost of production data are calculated according to standard procedures whereby the variable costs relate to actual enterprise costs while the forage costs are apportioned according to the weighting of the livestock enterprise on the basis of its associated livestock units. This method is also used for allocating the fixed/overhead costs and other outputs, except that there is a further adjustment to account for the weighting of any arable enterprises within the whole farm system. Here, values are allocated on the basis of livestock units and the percentage area that is utilised by the livestock enterprises as a whole. This method helps prevent the allocation of arable costs to the livestock enterprises. All outputs and costs are then divided by the unit of production (litres for milk, kg liveweight for stores and deadweight for finished beef and lamb production).

To fully reflect costs and put businesses on a comparable basis with respect to use of own labour, land and capital resources, imputed values are estimated for unpaid labour (farmer/spouse/other), interest on the farmer's share of tenant's capital (the total on-farm value of buildings, machinery, livestock and milk quota calculated at an interest rate of 6%) and imputed rent (rental value of owner occupied land excluding buildings). These costs are allocated on the same basis as for other fixed costs described above.

2 Results

2.1 Overview

The output data for beef and sheep (Table 1) and for milk (see Section 3.1) confirm the typical finding of reduced output per ha for organic farms compared with non-organic, but higher prices per kg at least for organic beef and milk. Prices for store cattle were actually lower for organic farms, but the small sample size and differences in transfer ages may have influenced this. For lamb, the similar sale prices reflect market conditions in recent years, where there has been virtually no premium for organic lamb in the context of an oversupply situation.

Organic variable costs are often lower than conventional due to a lower level of input usage, although fixed costs, which may be similar per farm or unit land area, are often higher per unit of production due to lower physical production over which to spread these costs. Although the total costs of production can be higher on organic systems, these are usually off-set by higher levels of support payments.

In most cases, the combination of higher prices and reduced costs for organic can compensate to generate a higher net margin (or a least a reduced loss) per kg, although this is not the case for lamb. Ironically, where net margins are negative, as is often the case for beef and lamb production, the lower stocking rates for organic producers work to their advantage to generate lower losses per ha. This also applies with the value of the family's own resources used and support payments are taken into account (Table 1).

Table 1 Summary of costs of production data for beef and lamb

	Breeding beef (kg liveweight)				Trading beef (kg deadweight)		Lamb (kg deadweight)			
Year	*2012/13*		*2013/14*		*2013/14*		*2012/13*		*2013/14*	
Production system	*Organic*	*Conv.*	*Organic*	*Conv.*	*Organic*	*Conv.*	*Organic*	*Conv.*	*Organic*	*Conv.*
Holdings (n)	*6*	*37*	*11*	*74*	*6*	*25*	*13*	*124*	*12*	*136*
Yield/ha	181	278	199	264	185	221	76	173	71	179
Price/kg	145	155	164	182	444	404	364	361	385	386
Total output (p/kg)	**147**	**163**	**169**	**191**	**585**	**495**	**382**	**380**	**400**	**403**
Feeds	32	23	20	26	93	120	66	82	80	106
Veterinary and medicines	13	13	15	15	12	8	21	22	28	23
Forage	23	46	26	53	54	78	39	58	49	59
Other variable costs	20	17	14	20	50	59	33	34	40	35
Herd replacement	6	5	2	13	-	-	29	31	37	43
Total variable costs	**94**	**104**	**76**	**127**	**209**	**265**	**188**	**228**	**234**	**267**
Gross margin (p/kg)	**53**	**59**	**92**	**63**	**376**	**231**	**193**	**153**	**165**	**136**
Labour	8	12	5	14	10	14	0	0	28	13
Power and machinery	101	80	94	88	128	110	84	60	148	101
Land and buildings	36	23	25	27	36	29	111	77	41	26
General farm costs	35	32	36	35	49	41	53	39	65	42
Rent and finance	18	13	32	17	59	29	325	224	53	28
Total fixed costs	**198**	**161**	**193**	**181**	**281**	**223**	**573**	**400**	**335**	**210**
Total costs	**291**	**264**	**269**	**308**	**490**	**488**	**762**	**628**	**569**	**477**
Net Margin (p/kg)	**-144**	**-102**	**-100**	**-117**	**95**	**7**	**-380**	**-248**	**-170**	**-74**
Net Margin (£ per ha)	***-261***	***-283***	***-200***	***-310***	***176***	***16***	***-290***	***-428***	***-120***	***-133***
Cost of farm family's own resources	491	331	355	338	472	389	388	250	441	269
Tir Mynydd, agri-environment	42	11	34	17	32	10	63	15	81	20
Organic Farming Scheme support	25	1	12	1	9	1	31	1	21	1
Single farm payment	125	90	88	91	80	118	156	108	142	112
Net Margin incl. own resources and support payments (p/kg)	**-443**	**-330**	**-320**	**-346**	**-256**	**-253**	**-517**	**-375**	**-367**	**-210**
Net Margin incl. own resources and support payments (£/ha)	***-802***	***-920***	***-636***	***-915***	***-472***	***-560***	***-176***	***-301***	***-259***	***-377***

2.2 Dairy enterprise production costs

Dairy costs of production were calculated from the Defra dataset for England and Wales, which provided data from 41 organic and 221 comparable conventional holdings, as well as an identical sample (i.e. only including those farms that were in the FBS sample for both years) of 38 organic and 89 conventional farms for 2012/13 and 2013/14. The England and Wales data are summarised in Table 2; more detailed results with regards to costs of production are shown Tables 3 and 4.

The identical sample data indicated a slightly increased milk yield for both organic and conventional holdings between 2012/13 and 2013/14, with enterprise output rising slightly for both conventional and organic farms. However, both organic and conventional variable costs were also higher, as were fixed costs. Overall, the organic and conventional net margins including imputed costs (but excluding support payments) were improved in 2013/14 although still negative in both cases.

The full sample indicates a similar pattern of greater organic output but higher variable and fixed costs, resulting in a similar (negative) net margin between sectors.

Table 2 Summary of costs of production data for milk, 2012/13 and 2013/14 (identical and full samples, pence/litre)

Sample Type	Identical Sample				Full Sample		
Herd characteristics	Organic		Conventional**		Organic		Conv.**
Year	2012/13	2013/14	2012/13	2013/14	2012/13	2013/14	2013/14
Number of herds	38	38	89	89	42	41	221
Average size of herd (dairy cows)	124	121	116	118	124	117	121
Average milk yield (litres per cow)	6014	6101	7316	7402	6049	6076	7321
Average farm size (effective ha)	171	172	132	132	168	167	121
Average size of the farm business (ESU)	155	147	148	148	153	143	150
Enterprise output (pence per litre)							
Milk disposals	33.8	36.8	28.3	31.7	33.8	36.8	31.9
Other output less transfers in	-1.5	-1.7	-1.4	-1.0	-1.5	-1.8	-1.2
Dairy outputs	**32.3**	**35.1**	**27.0**	**30.7**	**32.3**	**35.1**	**30.8**
Variable Costs							
Concentrates	9.8	10.1	8.7	9.2	10.0	10.1	9.2
Other feed and keep	0.8	1.0	0.5	0.6	0.8	0.9	0.7
Other livestock costs - dairy	4.5	4.3	3.2	3.3	4.6	4.3	3.3
Total variable costs	**15.2**	15.4	12.5	13.1	15.4	15.3	13.2
Herd replacement	**1.2**	1.3	0.9	1.1	1.1	1.3	1.2
Forage variable costs	**0.4**	0.6	1.5	1.6	0.4	0.6	1.5
Gross margin including forage costs	**15.5**	**17.8**	**12.1**	**14.9**	**15.4**	**17.9**	**14.9**
Fixed Costs$							
Labour	3.8	4.4	2.0	2.4	3.8	4.3	2.4
Power and machinery	5.2	5.7	4.0	4.5	5.1	5.7	4.8
Land and buildings	1.4	1.4	1.1	1.2	1.4	1.4	1.2
General farm costs	1.9	1.9	1.5	1.6	1.9	1.9	1.6
Rent and finance	1.3	1.5	1.0	1.1	1.3	1.5	1.1
Total fixed costs	**13.7**	**14.9**	**9.6**	**10.8**	**13.5**	**14.9**	**11.0**
Total actual costs	**30.5**	**32.2**	**24.5**	**26.6**	**30.4**	**32.0**	**26.8**
Net margin over actual costs	**1.8**	**2.9**	**2.5**	**4.1**	**1.9**	**3.1**	**3.9**
Total imputed costs#	**5.0**	**5.5**	**4.0**	**4.4**	**4.9**	**5.7**	**4.7**
Total costs including imputed	**35.5**	**37.7**	**28.5**	**31.0**	**35.3**	**37.7**	**31.5**
Net margin over all costs	**-3.2**	**-2.6**	**-1.5**	**-0.3**	**-3.0**	**-2.6**	**-0.7**
Other related outputs (ORO)							
Agri-environment payments (exc OFS)	1.2	1.1	0.2	0.2	1.1	1.1	0.2
Organic Farming Scheme Payment	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Single Payment Scheme	0.3	0.3	0.3	0.4	0.3	0.3	0.3
Byproducts & forage	2.6	2.7	1.7	1.7	2.7	2.7	1.6
Total other related outputs	**4.1**	**4.2**	**2.2**	**2.3**	**4.1**	**4.1**	**2.1**
NM over all costs (inc. ORO)	**0.9**	**1.6**	**0.7**	**2.0**	**1.1**	**1.5**	**1.4**

$ Fixed costs are proportioned to enterprise according to the ratio of livestock units per enterprise and the proportion of the farm area in forage production

Includes unpaid labour, imputed rent and interest on tenants capital

** Conventional data are from whole farm analysis clustered conventional farms

Table 3 Costs of production - dairy, identical sample, 2012/13 & 2013/14 (p/litre)

	Organic		Conventional	
	2012/13	2013/14	2012/13	2013/14
Sample size	38	38	89	89
Herd size - numbers	124	121	116	118
Herd size - LU	125	122	117	118
Total Grazing LU	197	196	193	193
Litres of milk produced per cow	6014	6101	7316	7402
Percentage Dairy LU to Total GLU	63	62	61	61
Farm size - effective hectares	171	172	132	132
Farm size - ESU	155	147	148	148
% of area used for forage/grazing	93	96	90	91
Enterprise output (pence per litre)				
Dairy - milk	33.8	36.8	28.3	31.7
- livestock purchases, sales and transfers	-1.8	-0.6	-1.6	-1.2
- net milk quota	0.0	0.0	0.0	0.0
- valuation change	0.3	-1.1	0.3	0.2
Total dairy output	**32.3**	**35.1**	**27.0**	**30.7**
Costs (pence per litre)				
Concentrates	9.8	10.1	8.7	9.2
Purchased bulk feed (hay & straw)	0.5	0.7	0.4	0.5
Stock keep	0.3	0.3	0.1	0.1
Veterinary and medicines	1.0	0.9	1.0	1.0
Other livestock costs - dairy	3.5	3.4	2.3	2.3
Herd replacement	1.2	1.3	0.9	1.1
Total variable costs	**16.4**	**16.7**	**13.4**	**14.2**
Seeds	0.2	0.4	0.2	0.2
Fertilisers	0.0	0.1	1.0	1.1
Sprays	0.0	0.0	0.1	0.1
Other forage costs	0.1	0.1	0.1	0.2
Total forage costs	**0.4**	**0.6**	**1.5**	**1.6**
Gross margin including forage costs	**15.5**	**17.8**	**12.1**	**14.9**
Paid labour	3.8	4.4	2.0	2.4
Machinery - contract work	1.6	1.5	1.0	1.1
- repairs	0.9	1.1	0.6	0.8
- fuels	0.8	0.9	0.7	0.8
-depreciation	1.5	1.7	1.2	1.4
Buildings depreciation	0.8	0.7	0.5	0.6
General farm costs	1.0	1.0	0.8	0.8
Water	0.4	0.3	0.3	0.3
Electricity	0.5	0.6	0.4	0.4
Land expenses	0.6	0.6	0.6	0.6
Insurance	0.5	0.6	0.5	0.5
Rent	0.8	1.0	0.6	0.6
Interest payments	0.5	0.5	0.4	0.5
Total fixed costs	**13.7**	**14.9**	**9.6**	**10.8**
Total actual costs	**30.5**	**32.2**	**24.5**	**26.6**
Net margin over actual costs	**1.8**	**2.9**	**2.5**	**4.1**
Imputed costs				
Unpaid labour (farmer, spouse, other)	2.5	2.9	2.0	2.4
Imputed rent	1.4	1.5	1.0	1.1
Interest on tenant's capital (6% rate)	1.1	1.2	0.9	0.9
Total imputed costs	**5.0**	**5.5**	**4.0**	**4.4**
Total costs (inc. imputed costs)	**35.5**	**37.7**	**28.5**	**31.0**
Net margin over all costs	**-3.2**	**-2.6**	**-1.5**	**-0.3**
Other related outputs (ORO)				
Agri-environment payments (exc OFS)	1.2	1.1	0.2	0.2
Organic Farming Scheme Payment	0.0	0.0	0.0	0.0
By products and forage	0.3	0.3	0.3	0.4
Single Payment Scheme	2.6	2.7	1.7	1.7
Total other related outputs (ORO)	**4.1**	**4.2**	**2.2**	**2.3**
Net margin over all costs (inc. ORO)	**0.9**	**1.6**	**0.7**	**2.0**

Table 4 Costs of production - dairy, full sample, 2012/13 & 2013/14 (p/litre)

	Organic			Conventional
	2012/13	2013/14		2013/14
Sample size	42	Top 5	41	221
Herd size - numbers	124	108	117	121
Herd size - LU	124	108	118	121
Total Grazing LU	195	176	193	192
Litres of milk produced per cow	6049	7135	6076	7321
Percentage Dairy LU to Total GLU	64	61	61	63
Farm size - effective hectares	168	117	167	121
Farm size - ESU	153	122	143	150
% of area used for forage/grazing	93	100	96	92
Enterprise output (pence per litre)				
Dairy - milk	33.8	39.3	36.8	31.9
- livestock purchases, sales and transfers	-1.3	-1.2	-0.8	-1.6
- net milk quota	0.0	0.0	0.0	0.0
- valuation change	-0.2	0.7	-1.0	0.4
Total dairy output	**32.3**	**38.8**	**35.1**	**30.8**
Costs (pence per litre)				
Concentrates	10.0	9.8	10.1	9.2
Purchased bulk feed (hay & straw)	0.6	0.3	0.7	0.6
Stock keep	0.2	0.2	0.2	0.1
Veterinary and medicines	1.0	0.8	0.9	1.0
Other livestock costs - dairy	3.6	2.9	3.4	2.3
Herd replacement	1.1	2.0	1.3	1.2
Total variable costs	**16.5**	**16.0**	**16.6**	**14.4**
Seeds	0.2	0.4	0.4	0.2
Fertilisers	0.0	0.0	0.1	1.1
Sprays	0.0	0.0	0.0	0.1
Other forage costs	0.1	0.2	0.1	0.2
Total forage costs	**0.4**	**0.6**	**0.6**	**1.5**
Gross margin including forage costs	**15.4**	**22.3**	**17.9**	**14.9**
Paid labour	3.8	3.9	4.3	2.4
Machinery - contract work	1.5	1.6	1.5	1.2
- repairs	0.9	1.1	1.1	0.8
- fuels	0.8	0.9	0.9	0.8
-depreciation	1.4	2.7	1.7	1.5
Buildings depreciation	0.8	0.6	0.7	0.6
General farm costs	1.0	0.7	1.0	0.8
Water	0.4	0.3	0.3	0.3
Electricity	0.5	0.5	0.6	0.5
Land expenses	0.6	0.7	0.6	0.6
Insurance	0.5	0.6	0.6	0.5
Rent	0.8	1.3	1.0	0.6
Interest payments	0.5	0.2	0.5	0.5
Total fixed costs	**13.5**	**15.0**	**14.9**	**11.0**
Total actual costs	**30.4**	**31.6**	**32.0**	**26.8**
Net margin over actual costs	**1.9**	**7.3**	**3.1**	**3.9**
Imputed costs				
Unpaid labour (farmer, spouse, other)	2.4	3.5	3.0	2.6
Imputed rent	1.4	1.3	1.5	1.2
Interest on tenant's capital (6% rate)	1.1	1.5	1.2	0.9
Total imputed costs	**4.9**	**6.3**	**5.7**	**4.7**
Total costs (inc. imputed costs)	**35.3**	**37.9**	**37.7**	**31.5**
Net margin over all costs	**-3.0**	**0.9**	**-2.6**	**-0.7**
Other related outputs (ORO)				
Agri-environment payments (exc OFS)	1.1	0.5	1.1	0.2
Organic Farming Scheme Payment	0.0	0.0	0.0	0.0
By products and forage	0.3	-0.1	0.3	0.3
Single Payment Scheme	2.7	1.7	2.7	1.6
Total other related outputs (ORO)	**4.1**	**2.1**	**4.1**	**2.1**
Net margin over all costs (inc. ORO)	**1.1**	**3.1**	**1.5**	**1.4**

2.3 Beef enterprise production costs

Costs of production data for beef and lamb were only available for Welsh farm data, as livestock sale weights are not collected by FBS in England. The organic sample sizes were still relatively small in 2013/14, but improved compared with 2012/13. However, it was not possible to show beef finishing data for 2012/13 due to the small sample.

Breeding beef suckler store production

The sample of 11 Welsh organic holdings in 2013/14 achieved lower output than conventional holdings (Table 5), with less output per hectare and a lower average price. However, due to lower costs the organic gross margin was 46% higher at 92p per kg LW. Due to lower physical output, organic fixed costs were higher per kilogram. Even after the addition of support payments the overall net margins were negative for both sectors.

Finished (trading) beef production

The finishing beef sample was small in 2013/14 and too small to publish in 2012/13, however the results (Table 6) indicate that the organic holdings achieved greater output, combined with lower variable costs, but higher fixed costs to achieve a greater (although still negative) overall net margin.

These results should be treated with a degree of caution due to the small sample size.

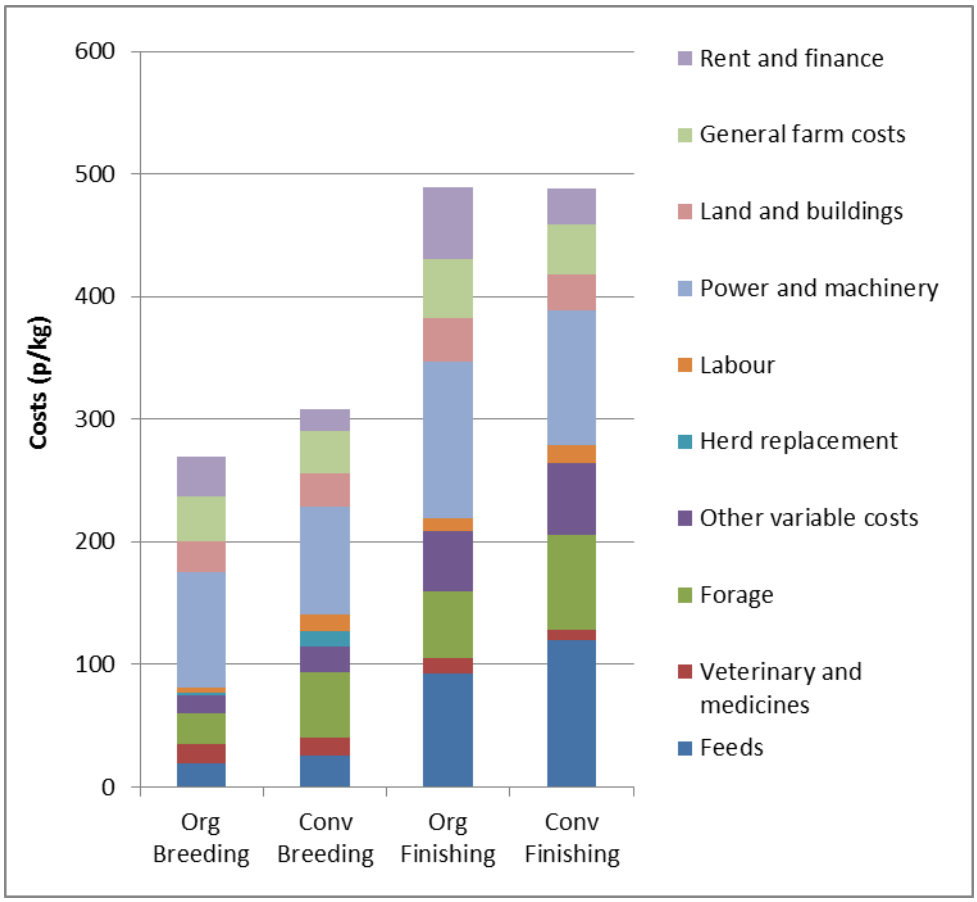

Figure 1 2013/14 Beef enterprise cost of production results overview

Table 5 Costs of production – breeding beef 2012/13 & 2013/14 (p/kg LW)

WELSH ORGANIC BREEDING BEEF PRODUCTION COSTS 2013/14

	ORGANIC		CONVENTIONAL	
	2012/13	2013/14	2012/13	2013/14
Number of herds	6	11	37	74
Farm size ESU	42	35	39	35
Farm size - eff ha	163	152	122	114
Farm size - forage ha	148	141	110	105
Total Grazing LU	124	113	123	115
Stocking rate - all GLU/ha	0.84	0.80	1.12	1.09
Herd size - numbers	38	44	36	36
Percentage Beef LU to Total GLU	31%	39%	31%	34%
All values below pence per kilogram liveweight unless otherwise indicated				
Variable costs				
Purchased concentrates	22.5	12.1	17.4	18.2
Home grown concentrates	2.6	1.3	2.7	1.5
Coarse fodder, tack and grass keep	7.0	6.4	2.7	5.8
Veterinary and medicines	12.6	15.1	12.8	15.2
Other livestock costs	15.8	12.1	16.3	18.5
Allocatable contracting	4.2	1.7	0.6	1.5
Total variable costs	**64.7**	**48.5**	**52.4**	**60.7**
Herd replacement cost	**6.3**	**2.2**	**5.4**	**13.1**
Forage costs (allocated on a livestock unit basis)				
Fertilisers, seeds and sprays	10.3	15.2	26.8	33.1
Forage contracting	2.0	4.1	7.7	11.0
Grass keep	5.1	1.9	7.9	5.9
Other forage costs	5.3	4.6	3.6	3.4
Total forage costs	**22.7**	**25.8**	**45.9**	**53.4**
Overhead costs (allocated on a livestock unit basis)				
Paid labour	7.9	4.6	12.3	13.6
Machinery - repairs	18.6	14.8	15.8	16.6
- fuel	24.9	24.3	21.7	21.9
- other contract and hire	3.9	3.4	2.7	3.5
- depreciation	53.2	51.8	40.2	45.8
Property - repairs	22.6	14.7	14.8	15.0
- depreciation	13.4	10.7	8.5	12.0
Other - general farm costs	19.9	21.4	18.6	20.1
- insurances	15.3	14.7	13.2	14.9
Rent and finance - rent	15.8	23.5	7.4	5.5
- bank interest	0.2	1.7	1.6	3.1
- bank charges	0.9	3.3	1.6	2.6
- other interest	1.2	3.7	2.1	6.0
Total overhead costs	**197.8**	**192.6**	**160.5**	**180.6**
Total cost of production	**291.5**	**269.1**	**264.3**	**307.7**
Kg beef produced (weaned calves)	8282	10828	9,429	9,412
Kg beef per cow (weaned calves)	218	247	265	259
Kg beef per ha (weaned calves)	181	199	278	264
Breeding beef enterprise output				
Weaned calf output	144.8	164.2	154.8	182.0
Less calf purchases	0.0	0.0	0.1	0.1
By-products	2.4	4.4	7.9	8.6
Total enterprise output	**147.1**	**168.6**	**162.7**	**190.5**
Enterprise gross margin (excl. overheads)	**53.4**	**92.1**	**59.0**	**63.4**
Enterprise net margin (incl. overheads)	**-144.3**	**-100.5**	**-101.6**	**-117.2**
Enterprise net margin (£/ha)	**-261**	**-200**	**-283**	**-310**
Value of farm family's own resources				
Own/spouse labour	77.0	83.2	63.6	73.9
Unpaid labour	26.4	22.5	14.7	18.3
Rental value of O-O land	209.5	129.0	112.5	124.7
Interest at 6% on tenant's capital#	178.1	119.9	140.0	121.2
Total own resources	**491.0**	**354.6**	**330.8**	**338.1**
Enterprise net margin including own resources	**-635.3**	**-455.1**	**-432.4**	**-455.2**
Support payments				
Agri-environment payments	41.9	34.4	11.4	16.6
Organic Aid	24.6	12.4	0.6	0.9
Single Payment Scheme	125.3	88.2	89.9	91.4
Total support payments	**191.9**	**134.9**	**101.9**	**108.8**
Enterprise net margin including own resources and Enterprise NM incl. OR & SP (£/ha)	**-443.4** / **-802**	**-320.2** / **-636**	**-330.5** / **-920**	**-346.4** / **-915**

* sorted by net margin/kg

minus actual interest paid (see fixed costs)

Table 6 Costs of production – trading (finished) beef, 2013/14 (p/kg DW)

WELSH ORGANIC TRADING BEEF PRODUCTION COSTS 2013/14

	ORGANIC 2013/14	CONVENTIONAL 2013/14
Number of herds	6	25
Farm size ESU	38	38
Farm size - eff ha	147	112
Farm size - forage ha	132	94
Stocking rate - all GLU/ha	0.91	1.29
Herd size - LU	32.40	48.34
Total Grazing LU	120.95	121.46
Percentage Beef LU to Total GLU	0.26	0.45
All values below pence per kilogram deadweight unless otherwise indicated		
Variable costs		
Purchased concentrates	72.3	80.1
Home grown concentrates	19.7	35.4
Coarse fodder, tack and grass keep	0.8	4.1
Veterinary and medicines	11.9	8.2
Other livestock costs	45.1	56.6
Allocatable contracting	4.9	2.3
Total variable costs	**154.6**	**186.6**
Forage costs (allocated on a livestock unit basis)		
Fertilisers, seeds and sprays	35.3	51.3
Forage contracting	4.7	11.5
Grass keep	5.4	10.1
Other forage costs	8.9	5.2
Total forage costs	**54.4**	**78.0**
Overhead costs (allocated on a livestock unit basis)		
Paid labour	9.7	13.9
Machinery - repairs	17.6	20.8
- fuel	34.9	30.6
- other contract and hire	3.2	3.5
- depreciation	71.8	55.5
Property - repairs	22.8	16.8
- depreciation	13.3	12.3
Other - general farm costs	31.1	24.2
- insurances	17.4	16.6
Rent and finance - rent	45.3	14.8
- bank interest	2.3	3.8
- bank charges	4.9	4.1
- other interest	6.0	6.6
Total overhead costs	**280.6**	**223.4**
Total cost of production	**489.6**	**488.0**
Kg beef produced	6462	9303
Finished price per kg (£)	4.44	4.04
Kg beef per ha	184.57	221.13
Trading beef enterprise output		
Fat cattle sold	694.4	929.6
Cattle transferred out	83.2	30.6
Store cattle sold	88.9	1.1
Killed for home consumption	0.0	0.0
Cattle valuation change	106.2	31.0
By-products	0.0	0.0
Less cattle purchased	*37.8*	*329.0*
Less cattle transferred in	*350.1*	*168.3*
Total enterprise output	**584.8**	**495.2**
Enterprise gross margin (excl. overheads)	**375.7**	**230.6**
Enterprise net margin (incl. overheads)	**95.2**	**7.2**
Enterprise net margin (£/ha)	**176**	**16**
Value of farm family's own resources		
Own/spouse labour	90.2	66.0
Unpaid labour	9.1	18.0
Rental value of O-O land	144.6	144.2
Interest on Tenants Capital less bank interest	227.9	161.1
Total own resources	**471.8**	**389.3**
Enterprise net margin including own resources	**-376.7**	**-382.1**
Support payments		
Agri-environment payments	32.1	9.5
Organic Aid	9.0	0.9
Single Payment Scheme	79.9	118.4
Total support payments	**121.0**	**128.9**
Enterprise net margin including own resources and support payments	**-255.7**	**-253.2**
Enterprise NM incl. OR & SP (£/ha)	**-472**	**-560**

minus actual interest paid (see fixed costs)

2.4 Lamb production costs

Finished (trading) lamb production

The sample of 12-13 Welsh organic finished lamb producers achieved an identical price per kg and total financial output to conventional producers, but physical output was materially lower. Organic variable costs were lower than conventional, mainly due to lower feed and forage costs, but organic fixed costs were much higher, in main due to the lower physical production. Overall, the organic net margin was substantially worse than the conventional level, and the addition of imputed costs and support payments does not improve the position.

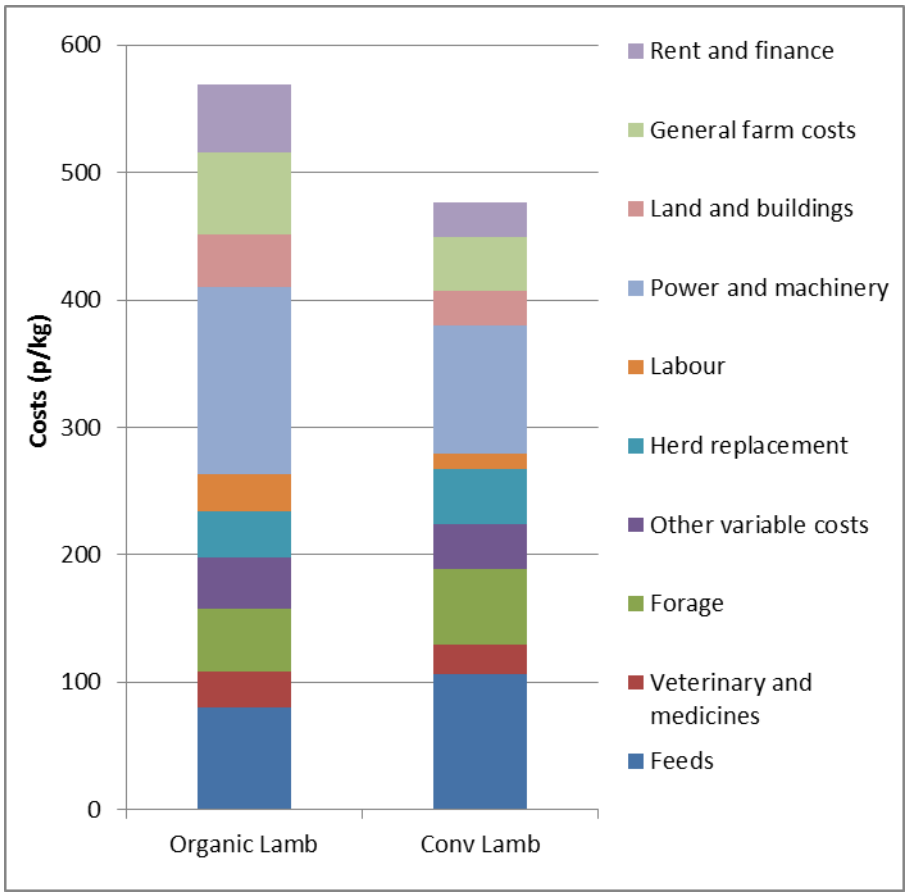

Figure 2 2013/14 Lamb enterprise cost of production results overview

Table 7 Costs of production – finished lamb, 2013/14 (p/kg DW)

WELSH ORGANIC LAMB PRODUCTION COSTS 2013/14

compared with previous year	ORGANIC		CONVENTIONAL	
	2012/13	2013/14	2012/13	2013/14
Number of flocks	13	12	124	136
Farm size ESU	36	37	43	44
Farm size - eff ha	137	148	129	128
Farm size - forage ha	207	211	154	144
Stocking rate - all GLU/ha	0.76	0.73	1.08	1.08
Flock size - ewes and ewe lambs put to ram - Nos	454	426	642	641
Percentage Sheep LU to Total GLU	58%	54%	60%	59%
All values below pence per kilogram deadweight unless otherwise indicated				
Variable costs				
Purchased concentrates	49.9	65.7	70.1	92.3
Home grown concentrates	6.4	0.8	3.4	3.8
Coarse fodder, tack and grass keep	9.8	13.9	8.6	10.1
Veterinary and medicines	20.8	28.1	22.4	23.4
Other livestock costs	32.7	39.1	33.9	34.9
Allocatable contracting	0.6	0.9	0.4	0.5
Total variable costs	**120.1**	**148.4**	**138.8**	**164.9**
Flock replacement cost	**29.2**	**36.5**	**31.2**	**42.9**
Forage costs				
Fertilisers, seeds and sprays	16.4	24.6	35.5	36.9
Forage contracting	13.0	13.8	10.7	10.9
Grass keep	4.0	4.0	7.6	7.6
Other forage costs	5.7	7.0	3.8	3.6
Total forage costs	**39.1**	**49.4**	**57.6**	**59.1**
Overhead costs				
Paid labour	28.0	28.5	13.1	12.8
Machinery - repairs	24.7	26.2	18.9	18.5
- fuel	29.4	35.5	24.7	26.4
- other contract and hire	2.3	3.9	3.2	3.1
- depreciation	73.4	82.0	50.1	52.6
Property - repairs	26.3	26.2	15.9	15.0
- depreciation	10.8	15.0	10.8	11.5
Other - general farm costs	33.0	42.8	23.9	25.5
- insurances	20.0	21.8	15.5	16.6
Rent and finance - rent	28.3	35.4	15.0	15.4
- bank interest	1.2	4.6	2.4	3.6
- bank charges	1.6	6.0	2.3	2.3
- other interest	7.7	7.3	4.4	6.8
Total overhead costs	**286.6**	**334.9**	**200.2**	**210.0**
Total cost of production	**475.0**	**569.2**	**427.8**	**476.9**
Kg lamb produced	9211	7997	15844	15327
Kg lamb per ha	76	71	173	179
Lambs reared per ewe	1.28	1.19	1.32	1.29
Kg lamb produced per ewe	21.9	20.6	25.1	24.2
Average finished lamb weight (kg)	17.0	17.2	18.6	18.6
Average finished lamb price (£)	61.65	66.11	67.19	71.95
Averaged finished price per kg (£)	3.64	3.85	3.61	3.86
Lamb enterprise output				
Finished lambs sold	285.5	294.7	303.1	320.7
Lambs transferred out	68.4	68.0	55.2	61.6
Store lambs sold	10.5	5.6	2.9	4.4
Killed for home consumption	0.4	0.0	0.4	0.4
Lamb valuation change	0.2	15.7	-0.7	0.2
Less lambs purchased	*0.1*	*3.2*	*1.3*	*1.8*
Total lamb output	**364.9**	**380.7**	**359.6**	**385.6**
Other by-products	3.9	9.5	7.4	7.9
Wool	12.8	9.4	13.3	9.2
Mark & Release receipts	0.0	0.0	0.2	0.0
Total by-products	**16.8**	**18.9**	**20.8**	**17.1**
Total enterprise output	**381.6**	**399.6**	**380.4**	**402.6**
Enterprise gross margin (excl. overheads)	**193.2**	**165.3**	**152.8**	**135.7**
Enterprise net margin (incl. overheads)	**-93.4**	**-169.6**	**-47.5**	**-74.3**
Enterprise net margin (£/ha)	**-71.4**	**-119.7**	**-82.0**	**-133.2**
Value of farm family's own resources				
Own/spouse labour	142.2	145.0	86.1	96.7
Other unpaid labour	21.6	20.4	19.0	20.7
Rental value of owner-occupied land	110.8	132.4	70.5	74.3
Interest on tenant's capital less bank interest	112.9	143.0	74.8	77.0
Total own resources	**387.5**	**440.8**	**250.4**	**268.6**
Enterprise net margin including own resources	**-480.9**	**-610.4**	**-297.8**	**-342.9**
Support payments				
Agri-environment payments	62.7	81.2	14.9	19.8
Organic Aid	31.2	20.8	0.7	0.6
Single Payment Scheme	156.4	141.9	107.6	112.1
Total support payments	**250.2**	**243.8**	**123.2**	**132.5**
Enterprise net margin including own resources and support payments	**-230.7**	**-366.6**	**-174.6**	**-210.4**
Enterprise NM incl. OR & SP (£/ha)	**-176.3**	**-258.8**	**-301.5**	**-377.2**

* sorted by net margin/kg

minus actual interest paid (see fixed costs)