

WELSH DAIRY FARMERS SURVEY REPORT

Prepared for

Coleg Sir Gâr

2014

YOUR VOICE, YOUR FUTURE
WELSH DAIRY INDUSTRY



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Prepared by:

Promar International Limited

Alpha Buildings
London Road
Stapeley
Nantwich
Cheshire
CW5 7JW

Phone: 01270 616800
Fax: 01270 616704
Email: Eifion.williams@genusplc.com
Web: www.promar-international.com

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ACRONYMS

GB Great Britain

UK United Kingdom

TB Tuberculosis

AD Anaerobic Digester

FBA Farm Business Accounts

RPA Rural Payment Agency

PV Photovoltaic Panels

CAP Common Agricultural Policy

I. SUMMARY OF KEY MESSAGES

<i>52% of respondents intend to increase milk production</i>	52% of respondents indicated they planned to expand production over the next five years, 38% expecting production to remain the same and only 5% either decreasing production or exiting the industry. 5% of farmers indicated they did not know what they would do regarding future production.
<i>Those increasing production are likely to be younger farmers and farmers with more than 200 cows</i>	Farmers most likely to increase production are aged under 40, operate a housed system, have aligned milk contracts and have over 200 dairy cows.
<i>Those not intending to increase production are likely to be older farmers and farmers with fewer than 50 cows</i>	Farmers most likely not to increase production are typically aged between 60 and 65 years and those running smaller herds of between 10 and 49 cows.
<i>The survey results suggest that there will be a 20% increase in total milk production over the next five years</i>	Current annual milk production in Wales is approximately 1.5 billion litres. However, the figure for 2013/14 indicates a higher volume of 1.67 billion litres. From the survey results, it is estimated that production will rise to 1.8 billion litres by 2019, an increase of 20%. Taking account of this year's production figure, the total volume is likely to be between 1.8 and 2.0 billion litres in five years time.
<i>The increase in production will come from the 200+ cow herds</i>	Of the additional milk produced, 85% will come from 200+ cow herds, with 25% of that from those with more than 500 cows.
<i>Those on aligned contracts show more interest in increasing production</i>	The type of milk contract also appears to have an influence on farmers intentions to increase milk production. Our analysis shows that 73% of farms on aligned milk contracts intend to increase production.
<i>Welsh dairy farms are still heavily weighted towards older farmers, with partnership agreements most popular</i>	The vast majority of farmers are either owner occupiers or tenants. 61% of respondents were over 50 years old and 15% were under 40 years old. Most farms (78%) trade as family partnerships with Limited Company status more likely amongst the largest herds.

<i>The most popular herd size is between 50 and 149 cows, accounting for 60% of farms</i>	Nearly 60% of respondents had an average herd size of between 50 and 149 dairy cows. Almost 25% of respondents had over 200 dairy cows in their herd with 2% having more than 500 cows.
<i>Herds with 200 plus cows have insufficient youngstock to cover replacement needs</i>	The data shows that, generally, herds with over 200 cows have insufficient dairy youngstock to cover their herd replacement needs.
<i>Majority of respondents indicated that they have an all year round calving policy</i>	73% of all respondents indicated that they adopt an all year round calving policy. Of the remaining respondents 10% calve mainly in the autumn, 7% in the spring and 10% in both spring and autumn.
<i>Joint ventures and organic farming have low take-up among dairy farmers in Wales</i>	Uptake of joint ventures is low at just 5%. Around 50% of all joint ventures involve contract heifer rearing. Organic production is low with only 5% of respondents operating under organic status. No farmers indicated that they intend to convert to organic in the next five years.
<i>Uptake of the Glastir Scheme is relatively low among dairy farmers</i>	Only 30% of the respondents were registered under the Glastir Scheme with the majority having no intention to enter the scheme.
<i>Average number of workers per farm is 2.8 people</i>	The average number of paid workers per farm is 2.3 people. This is significantly higher on farms with the largest herds and lower on farms with smaller herds where family labour is relied upon more.
<i>The largest farms are most reliant on the dairy business</i>	A third of respondents have farms of between 50 and 100 ha. The largest farms, in terms of area tend to specialise on the dairy enterprise while smaller dairy farms are more likely to have suckler cows and a large number of sheep. Beef cattle were kept on most farms, regardless of unit size.
<i>Of the 52% of respondents that had a succession plan in place, they tended to be younger farmers and have larger herd sizes</i>	Of those aged under 40 years old, 70% had a succession plan in place, compared to those over 65 where only 50% have an agreed plan. The group least likely to have any succession plan were those aged between 50 and 59.

<i>First Milk has the greatest number of suppliers and also processes the greatest volume of milk in Wales followed by Freshways</i>	In this survey, First Milk has the greatest number of milk suppliers followed by Glanbia and Meadow Foods. In terms of milk intake, First Milk processes 224 million litres making them the largest processor of Welsh milk, followed by Freshways at 112 million litres per annum.
<i>Current Welsh milk buyers could absorb any increases in milk supply</i>	Feedback from Welsh dairy processors in early 2014 indicated many were interested in expanding or improving current processing capacity.
<i>Land has accounted for the greatest spend in the past five years</i>	In the past five years, the main capital expenditure has been on land purchase. Spending on additional land has been significantly higher than the spend to replace land on short or long term agreements.
<i>Expenditure on infrastructure has been relatively low over the past five years</i>	Based on information supplied, 50% of the respondents have invested less than £100,000 in their business over the past five years. The majority of those with higher levels of investment were farmers with herds over 200 cows.
<i>Higher level of spend expected going forwards</i>	The priority for future spend will be on buildings and parlours followed by land and manure storage.
<i>Investment plans for the majority that intend to invest will be over next three years</i>	The majority of planned investment is over the next three years which suggests respondents have relatively short term investment plans.
<i>25% of respondents have invested in renewable energy; a further 14% plan to</i>	Greatest investment has come from those with a herd size of between 200 and 500 cows, with the most popular choice of renewable energy being photovoltaic (PV) panels.
<i>TB is the greatest issue on farm, along with land availability</i>	The greatest issue across all herd sizes is TB followed by availability of land and milk price volatility except for herds over 500 cows with herd health and environmental legislation considered as a high constraint.
<i>High attendance at training and/or advice events</i>	Over 70% of farmers attended a training and/or advice event in the past 12 months. The most popular type of events are those held on-farm and discussion groups. 20% had one-to-one advice and support.

<p><i>More interest in discussion groups than on-farm events to support profitability</i></p>	<p>Discussion groups are viewed as having the greatest impact on the profitability of businesses followed by on-farm events.</p>
<p><i>Training and advice required in fertility and breeding as well as grass and forage management</i></p>	<p>Farmers, across all herd sizes, want to see more training and advice on cow fertility and breeding. Many also want more training and advice on grass and forage management.</p>
<p><i>Large herd managers express more interest in business and financial planning than smaller herd managers</i></p>	<p>Farmers with larger herds would like more information on business planning and financial management; those with smaller herds would prefer a focus on animal health and nutrition.</p>

2. INTRODUCTION

Coleg Sir Gâr commissioned Promar International to undertake a survey of the Welsh dairy industry as part of the 'Improving the Welsh Dairy Supply Chain Project'. The main purpose and objective of this initiative was to develop a better understanding of:

- the structure of dairy farms in Wales
- current production levels
- future intentions of farm businesses
- future industry support requirements.

The data and information also provides base line data for future strategy and policy making for the Welsh dairy sector and can be used to inform policymakers of the support required to drive the industry forward. The information generated from this study will be made available to the Dairy Development Centre, based at Coleg Sir Gâr, and DairyCo staff to support their work.

The survey was conducted by Promar International in partnership with Precision Prospecting.

This survey was conducted at the beginning of 2014 when farmers had access to better quality fodder and relatively good milk prices compared with the previous year when they experienced extremely poor weather conditions, poor quality fodder, high production costs and lower yields.

The methodology used was based on a self-completion questionnaire which was mailed out in February 2014 to every dairy farmer in Wales with a closing date for completion of the middle of May 2014. During the latter part of this period, self-completion was supplemented by telephone support from Precision Prospecting's Farm Business Unit; this method was preferred by many farmers. In order to reach the target response rate a campaign was launched to encourage farmers to participate in the survey. A logo was produced with the strap line 'Your Voice, Your Future' (overleaf); this formed part of the media awareness campaign during this period.



The final number of dairy farmers that responded to the survey, either by self-completion or by telephone interview was 943. This means the survey captured the views and opinions of more than 50% of dairy farmers in Wales.

The statistical results within this report are based on the responses received; however, milk production forecast is based on a weighted sample to more accurately reflect the structure of the Welsh dairy industry.

Acknowledgments

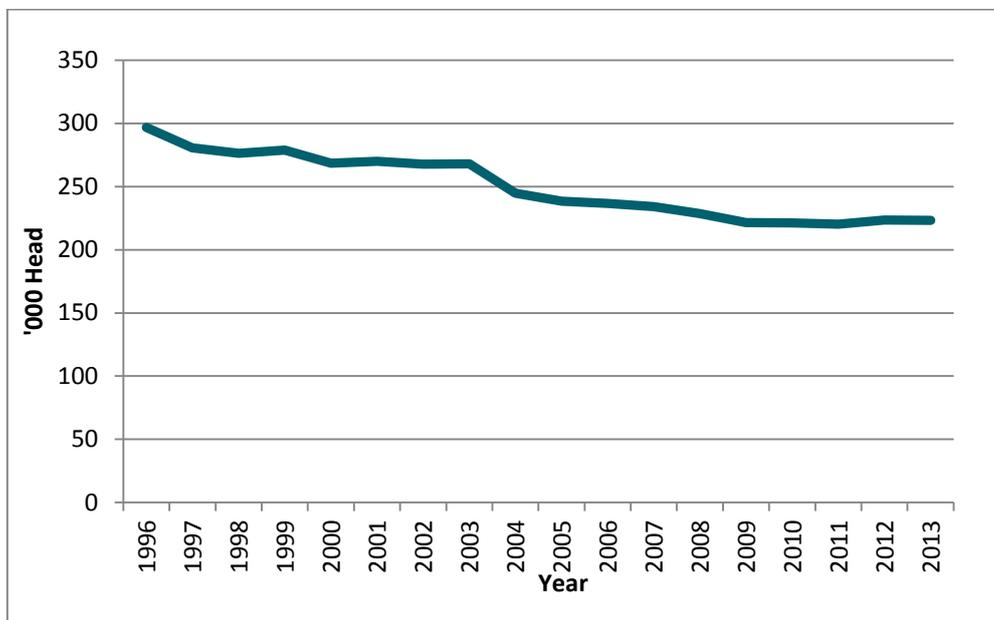
We wish to thank all dairy farmers who contributed to the survey and all those involved with the campaign process and the production of this report. We would also like to thank the members of the Project Steering Group (which consisted of key stakeholders for this project) for their support.

3. INDUSTRY BACKGROUND

DairyCo statistics show that at the end of May 2014 there were 1,855 milk producers in Wales. This is a 3.7% fall from the 1,926 producers in 2011 or a 1.23% per annum decline. This is slower than the 1.8% per annum decline in England over the same period.

Despite the reduction in producer numbers DairyCo¹ statistics suggest that the number of dairy cows in Wales has remained relatively static at around 223,000, having increased by about 1.0% from approximately 221,300 in 2010. Despite this increase, cow numbers are still significantly lower than the 268,000 head recorded in 2003, a general trend seen in Great Britain (GB).

Fig1: Welsh Dairy Cow Numbers



The UK’s Rural Payments Agency (RPA) data indicates that over the last five years Welsh milk production has averaged 1,552 million litres. Over this period production has grown from a low of just over 1,450 million litres in 2009/10 to a high of 1,670 million litres in 2013/14. Production in 2012/13 was lower at 1,527 million litres but this decline was largely due to the very poor weather and forage growing conditions across all of the UK in that year.

Total GB milk production was 11,624 million litres in 2013/14, the highest production seen since 2005/6. Since 2008/9 GB milk production has continually increased at between 1% and 5% per annum. However, as seen in Wales, 2012/13 was an exception with a 4% fall in GB production to 11,036 million litres. Over the past five years, Welsh milk production has averaged 1,552 million litres per annum, equivalent to 13.7% of total GB supply.

¹ Welsh DairyCo Datum 2013

The milk production figures calculated for this survey provides a milk production estimate of around 1,500 million litres for 2013/14. Based on the favourable weather conditions and rising milk prices, at the time when we carried out this research, we believe these figures are likely to be conservative and actual production for this period was 1,670 million litres.

In 2014, Promar conducted a study for DairyCo looking at the size and structure of the Welsh processing sector. The results of this study identified that over half (55%) of Welsh milk is processed within Wales while the remainder is processed in other UK facilities.

The 2014 Promar/DairyCo study also estimated that the Welsh industry produced over 80,000 tonnes of cheese, meaning cheese production accounted for around 90% of all liquid milk processed in Wales.

Data from the Food Standards Agency shows that there are around 45 facilities in Wales licensed to process bovine milk. These businesses vary from cheese plants with an annual capacity of 25,000 tonnes or more, to small-scale plants producing niche products.

Cheese processors (22 plants) and ice cream processors (10 plants) are the most common types of dairy processors in Wales. Wales has a range of dairy processing facilities capable of producing a variety of milk, cheese, butter and yogurt products. Milk powders are the only major dairy product category that is not produced by the Welsh dairy industry.

4. FARM STRUCTURE

4.1 Ownership

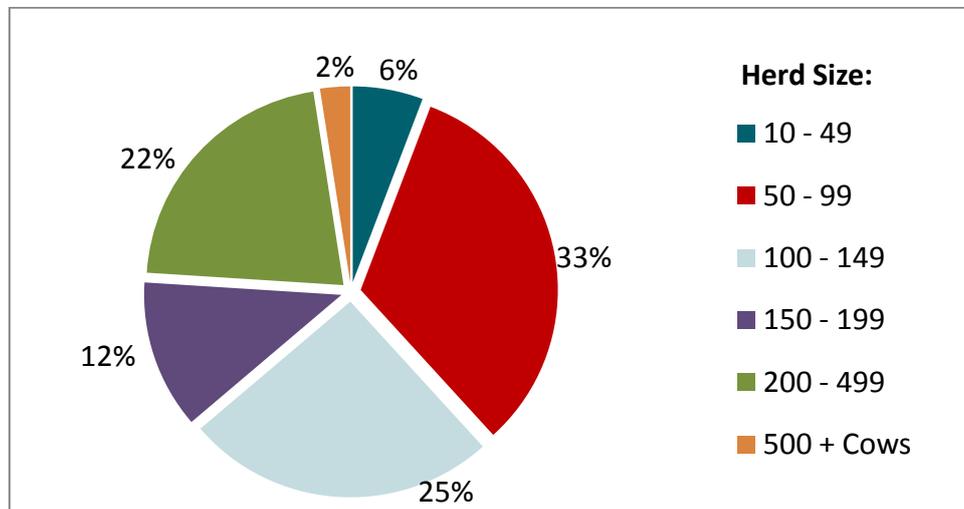
Over half of the farms surveyed were owner occupied with the highest proportion (68%) of owner occupied farms being those with between 10 and 49 dairy cows. There appeared to be no difference in ownership trends across different regions of Wales. The number of tenant-only farmers was low at around 10% of respondents and included all herd sizes. 26% of the respondents owned and rented land. The majority of farms with herds over 500 cows were either owner occupiers (43%) or had a combination of both owned and rented land (43%).

There were no respondents who described themselves as being “share farmers”, which is a very uncommon trading arrangement within the UK.

4.2 Herd Size and Replacement Levels

Half of those that responded were specialist dairy farms and half had a combination of dairy cows with other livestock including beef (50%), sheep (27%), store lambs (6%) and suckler cows (10%). The majority of farms reared their own replacement heifers.

Fig 2: Herd Size Of Respondents



60% of dairy farms have between 10 and 99 heifer replacements on farm, with 12% having more than 200. The only group indicating that surplus heifers were being reared were those with between 100 and 150 dairy cows (assuming a two year calving policy). The data indicates that herds with over 200 cows have insufficient youngstock to cover herd replacement or expansion needs, which suggests they are buying-in some of their replacements.

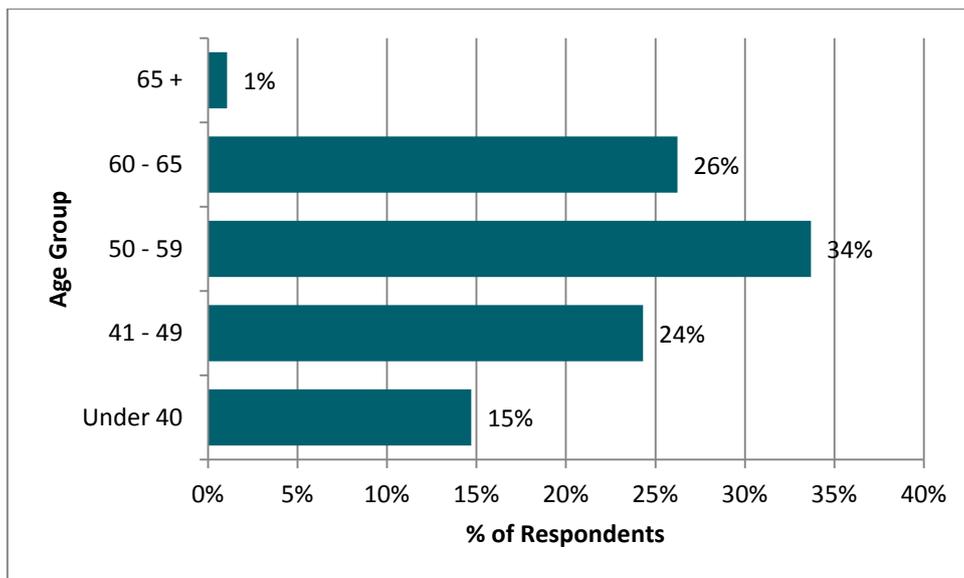
Current work undertaken by Genus² confirms that cattle imports to the UK are increasing each year. During 2012/13 cattle imports increased by between 8% and 9%³ compared to the previous year, despite a 13.5%⁴ fall in the number of cattle being slaughtered for TB. Based on current data, Genus projects a 22% increase in UK cattle imports in 2013/14 to around 40,000 dairy cattle, most of which will be Holstein or Holstein crosses.

If planned milk production increases are to be achieved, it is likely that demand for down calving heifers will increase.

4.3 Age

The majority of respondents were in the age category of 40 years old and over which may have been influenced by the request that the head of the holding completed the survey. Only 15% of respondents were under 40 years of age.

Fig 3: Age Of Respondents



Of the survey respondents, 61% were aged over 50 with 27% aged over 60; these figures are slightly lower than for those surveyed for the DairyCo intentions survey in 2013 in which 68% were aged over 50 and 33% over 60. Defra Farm Business Survey (2010/11) suggests that the average age of GB dairy farmers is 52.4 years. Over a period of 16 years, the average age has been consistent, despite the widespread perception of dairying as being an ageing industry.

² Genus plc is the parent company of Promar International (www.genusplc.com)

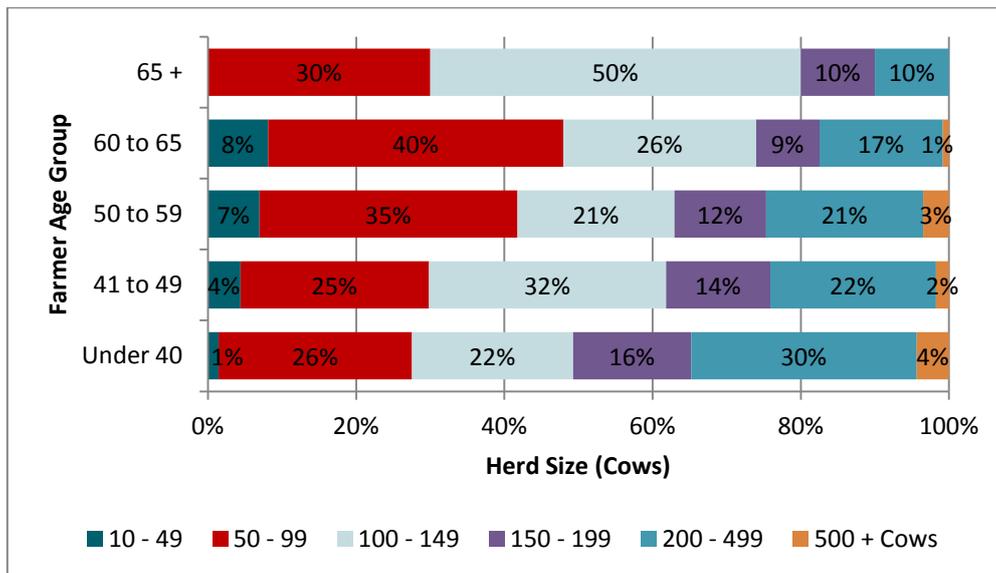
³ Rural payments agency (BCMS) for heifer imports into the UK

⁴ Defra dairy statistics: An insider guide 2014

The other main points to note are as follows:

- 27% of respondents were over the age of 60 and were predominant in the under 100 cow herd category
- Only 15% of farmers were under 40, of these 34% had herds of over 200 cows and 27% had herds of less than 100 cows. In contrast, of the farmers aged between 60 and 65, only 18% had herds of over 200 cows and 48% had herds of less than 100 cows

Fig 4: Age By Herd Size



4.4 Business Structure

The vast majority of farm businesses were registered as a partnership with no respondents describing their business as a joint venture or as share farming. As herd sizes increased, so did the number of limited companies.

The other main points to note are as follows:

- Of the respondents 78% traded as a partnership, as do the majority of dairy farms in the UK, with 13% trading as sole traders and 9% as limited companies. The most recent data from Promar (2014) highlighted that 87% of their recorded UK dairy units were structured as sole traders or partnerships and the remainder (13%) as limited companies
- Of those with a herd size of less than 500 cows, 70% were in a partnership compared with 52% of those with more than 500 cows

- 39% of those with more than 500 dairy cows traded as a limited company. It is likely that these are the most profitable, and for tax purposes, are advised by their financial advisors to structure the business as a limited company
- Only 14% of respondents operated as sole traders, which was expected, as the majority of farms in Wales are managed as family units

4.5 Joint Ventures

The number of farmers that run sections of their businesses as joint ventures is low at 5% with an increase of 3% planned over the next five years. This low uptake is common throughout the industry within the UK.

Heifer rearing is the most popular type of joint venture followed by contract farming.

The other main points to note are as follows:

- Of current joint ventures, 48% are involved with contract heifer rearing agreements, in particular those with herds of between 200 and 500 cows. This provides an opportunity for many farms to expand and to specialise in milk production, while allowing others to focus on contract heifer rearing
- The remaining agreements were for contract farming, contract crop growing and similar collaborations
- The type of joint venture agreement with least involvement was share farming, which is representative of the rest of the UK
- The highest number of farmers with joint venture agreements were those with herd sizes of more than 200 cows
- Respondents with more than 500 cows were most commonly working with others for contract growing crops

4.6 Labour

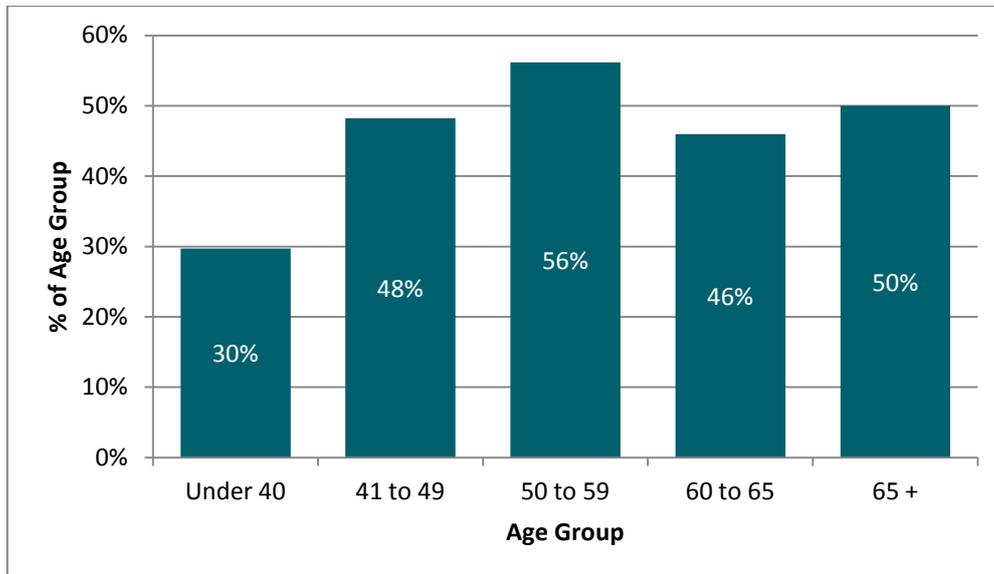
The results indicate that the average number of people working on a farm is 2.8, of which 2.3 are paid and the remainder unpaid. The vast majority of those working on farm are family members (1.8 people) with the majority indicating that they are being paid (1.5 people). The results indicate that herds of between 10 and 49 cows tend to have less than two workers, all of whom are often family members. As herd sizes increase, so does the number of workers: this is weighted strongly to an increase in non-family paid labour. On average, each herd with between 50 and 199 cows will have two family members working on the farm. Herd

sizes of between 200 and 500 cows will have three employees while herds of over 500 cows see a dramatic increase to over eight employees.

4.7 Succession

There is a substantial difference between those who have a succession plan in place and those who do not. Overall, 52% of respondents indicated that they have a succession plan in place on their farm. Surprisingly, 70% of those aged under 40 have a succession plan in place, compared to those aged over 65 where only 50% have an agreed plan. Of the respondents over 50 years of age, 54% have a succession plan, but only 44% have a plan in the 50 to 59 age group. This highlights that there are challenges and opportunities within the industry to develop attractive solutions that will allow older farmers to retire or reduce their involvement in day-to-day farming if they wish.

Fig 5: Percentage Of Those Without A Succession Plan Per Age Group



4.8 Glastir Registration

Uptake of the Glastir Scheme is relatively low at 30%. It was found that many dairy farmers have no interest in the scheme, with others finding that it conflicts with their farming system. As herd size increases then uptake of the Glastir scheme agreements tends to increase, with more take-up of the scheme in North Wales.

The other main points to note are as follows:

- The main reason given by respondents for not being involved with the scheme was that they had ‘no interest’ in it, with 30% not applying because ‘scheme options conflict with current farm policy’

- Awareness of the scheme appears to be reasonably high overall, with only 16% saying they were ‘not aware of the benefits of the scheme’
- Comparing the Welsh regions, the North West (29%) and North East (35%) have seen the greatest uptake of Glastir agreements.
- The lowest level of uptake has been in the South East with 13%

4.9 Cropping

Grass was the dominant crop on dairy farms, with 60% of respondents being solely grass based, due to the topography and climate in Wales. Other crops on farms included forage crops such as wholecrop, maize and other fodder crops, but with very little arable cropping.

The other main points to note are as follows:

- Of those that grew other crops, wholecrop was the most popular crop to supplement grass (19.5%) with the majority growing between 1 and 20 ha. Many are now growing wholecrop as a substitute for maize as recommended by many agronomists as a replacement for maize in a wet climate
- It is interesting to note that 30% of farms registered under the Glastir scheme grew wholecrop - this option may have been selected, by some, to assist entry
- Only 14% of dairy farms grew maize with 70% of these growing between 1 and 20 ha: this was most popular among those with a herd size of between 100 and 150 cows. UK trends show that the total area of maize has increased year-on-year since 2005. The majority of the maize grown is ensiled for dairy cows and the recent growth is mainly due to demand for use as a biofuel in AD plants

Fig 6: Area Of Maize Grown In The UK

Area Maize ('000ha)								
2005	2006	2007	2008	2009	2010	2011	2012	2013
131	137	146	153	163	164	164	158	194

Source: Defra 2014 June survey⁵

- Analysis of Promar’s FBA data for 2013 shows that, for spring calving herds, maize is the most popular crop to supplement grass on dairy farms with 74% growing maize and the remaining 26% growing wholecrop

⁵ <https://www.gov.uk/government/statistical-data-sets/structure-of-the-agricultural-industry-in-england-and-the-uk-at-june>

- Other fodder crops were grown by a similar number to those that grow maize, irrespective of herd size

4.10 Organic Production

Organic producers represented 5% of the sample, with 95% of these intending to remain organic for the next five years. There was no interest shown by any non-organic business to convert to organic production. It has been a challenging market for the organic dairy sector in recent years and it is not surprising that the level of interest for conversion is low.

4.11 Calving and Feeding Policy

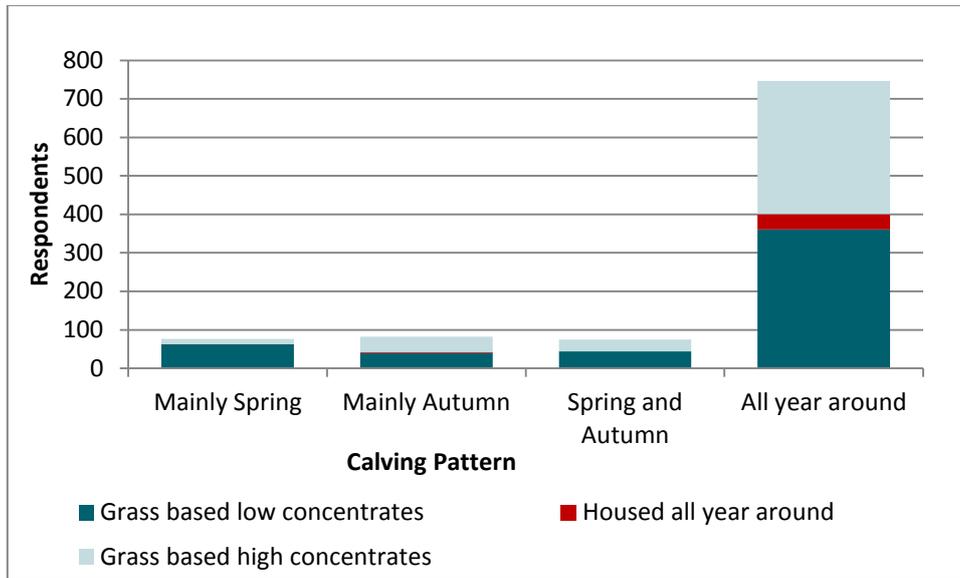
The calving policy for 73% of all herds within the sample indicated that they calved all year round, with 10% mainly autumn calving, 7% spring calving and 10% a mixture of spring and autumn calving. The data shows that 54% of respondents adopted a low-concentrate grass-based feeding policy while 46% have a high-concentrate grass-based system. Only 4.5% herds were housed all year round.

The majority of respondents stated that their system was based on an all year round calving pattern, but this does not necessarily imply that these farms have a planned calving policy in place. Work carried out by Promar would suggest that a high proportion of all year round calving patterns are a result of a high calving index due to fertility issues.

The GB average calving interval is nearly 14 months and the average age of first calving by replacement heifers is 28 months.⁶ If a farmer wishes to successfully manage block calving, the dairy herd needs a tight calving pattern and for replacement heifers to calve at two years. If this is achieved, the farmer would be performing at a better-than-average level.

⁶ Source: NMR

Fig 7: Calving Pattern By Production System



4.12 Other Enterprises

Those farmers with the largest herd size tend to concentrate on the dairy business with no suckler cows and only a few farmers having breeding ewes. Other beef animals were found on a variety of enterprise sizes, although this was most common on farms with less than 100 cows. The other main points to note are as follows:

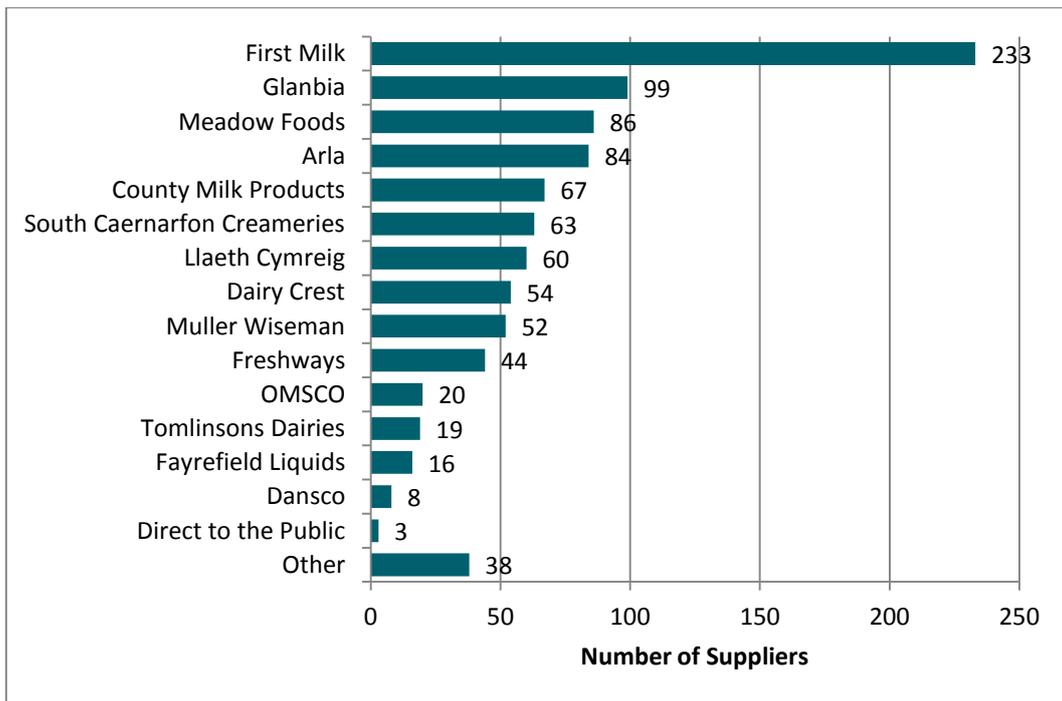
- Suckler cow enterprises are mainly found on dairy farms with fewer than 100 dairy cows
- 27% of farms had breeding ewes and 6% kept store lambs: this was more common on farms with less than 100 cows
- Other beef animals were found on 48% of farms: this included bull calves that were on farm when the survey was completed

5. MILK PRODUCTION

5.1 Milk Buyers

Of the survey respondents, 233 supplied First Milk, which makes it the largest milk purchaser in Wales, with Glanbia the second highest with 99 suppliers. Other milk purchasing companies are shown in Figure 8 below.

Fig 8: Milk Buyer And Number Of Suppliers



From the survey results, First Milk was the leading milk purchaser across all herd sizes, with the exception of those herds with 500+ cows, where Freshways was the main milk buyer. For expanding businesses (200+ cow herds) the leading processors were the larger milk companies, including Muller Wiseman, Dairy Crest and Arla. For herds with fewer than 50 cows, First Milk was the most popular buyer, with Llaeth Cymreig second.

Of the milk produced in Wales, 61% is sold under a liquid milk contract. Manufacturing milk contracts accounted for 27% of milk produced, followed by “balancing” at 7% and “directly aligned” at 4%. 1% of respondents sold milk under another type of contract.

At a regional level, the survey indicated that the choice of milk buyers was more fragmented. First Milk was the leading buyer in the South, but with the North having a mix of buyers including Arla, Meadow Foods, Glanbia and South Caernarfon Creameries. This is illustrated in Table I overleaf.

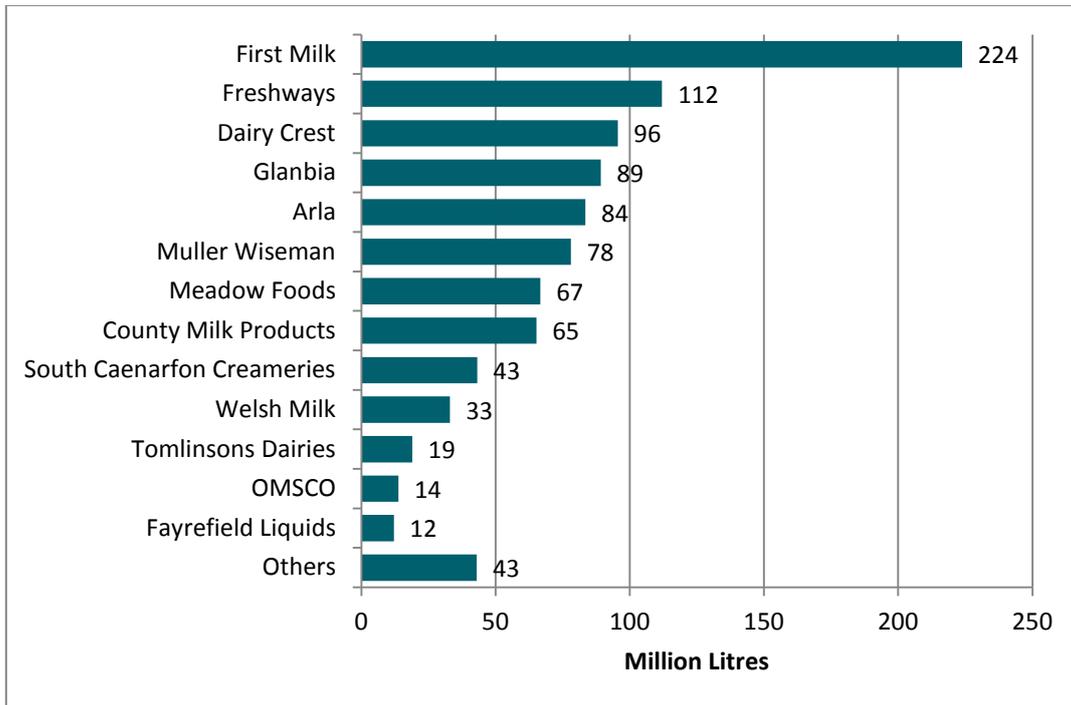
Table 1: Milk Buyer Of Respondents, By Region

North East		South East	
Arla	54	First Milk	45
Meadow Foods	52	Dairy Crest	9
Muller Wiseman	50	Arla	5
Tomlinsons Dairies	19	County Milk Products	5
Glanbia	9	OMSCO	4
First Milk	8	Meadow Foods	3
OMSCO	7	Cotteswold Dairy	3
South Caernarfon Creameries	4	Other	4
County Milk Products	3		
Llaeth Cymreig	3		
Other	12		
Total	221	Total	78

North West		South West	
South Caernarfon Creameries	40	First Milk	180
Glanbia	31	Glanbia	59
Arla	14	County Milk Products	59
Meadow Foods	5	Llaeth Cymreig	53
Llaeth Cymreig	3	Freshways	44
Other	3	Dairy Crest	42
		Meadow Foods	26
		South Caernarfon Creameries	20
		Fayrefield Liquids	15
		Arla	11
		Other	35
Total	96	Total	544

First Milk is the largest milk buyer in terms of both supplier numbers (233) and volume intake (224 million litres). This is followed by Freshways at 112 million litres, Dairy Crest at 96 million litres and Glambia at 89 million litres, as shown in Figure 10.

Fig 9: Milk Intake By Purchaser, Per Annum

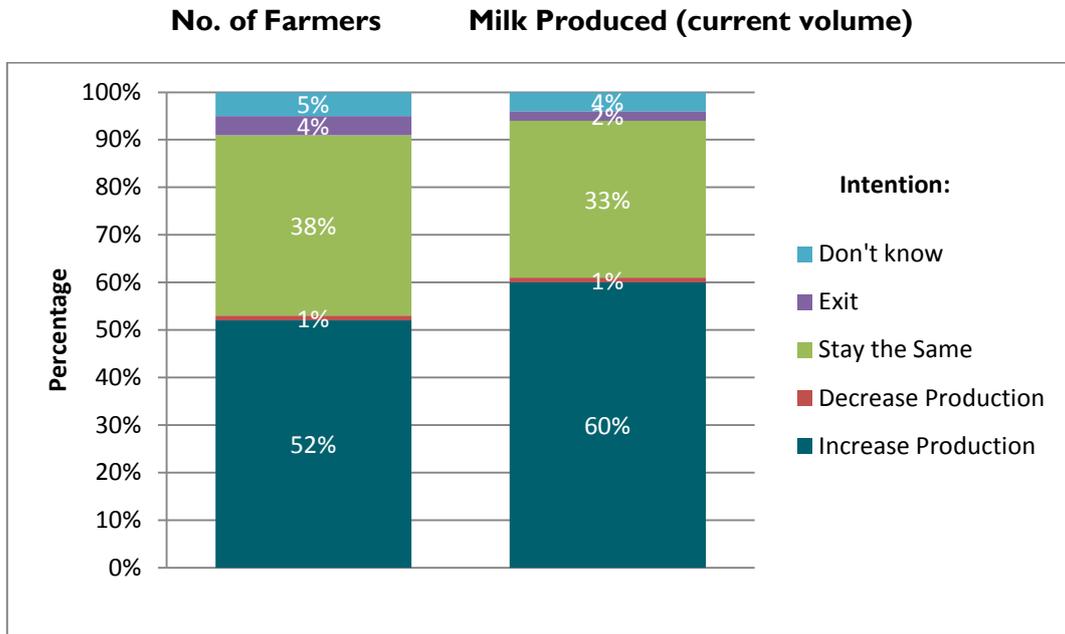


5.2 Milk Production Intentions

The survey was conducted during a relatively positive period for the Welsh, UK and global dairy industry. Farmer intentions regarding the industry, and particularly expansion, were very positive.

Based on the survey results, 52% of respondents indicated they planned to expand production over the next five years. A further 38% intended to stay the same size. Less than 1% planned to decrease production and only 4% planned to exit the industry. The high level of confidence in the industry is demonstrated by the fact that just 5% of farmers indicated they did not know what they would do regarding future production.

Fig 10: Farmers Future Intentions



Farms intending to expand milk production accounted for 52% of all farms, but these farms accounted for around 60% of the milk currently produced in Wales. Farm businesses that intend to stay the same size accounted for 38% of all farms, but only 33% of the milk currently produced. Similarly, farmers intending to exit the industry accounted for 4% of all farms, but only 2% of the milk currently produced.

Table 2: Respondents Increasing/Not Increasing Production

Increasing	Not Increasing
<ul style="list-style-type: none"> Farmers < 40 years old 	<ul style="list-style-type: none"> Farmers 60 – 65 years old
<ul style="list-style-type: none"> All year round housed systems 	<ul style="list-style-type: none"> Small herds of between 10 and 49 cows
<ul style="list-style-type: none"> Farms with aligned contracts 	<ul style="list-style-type: none"> Farms on 'other' contracts
<ul style="list-style-type: none"> Herds > 200 cows 	

Larger herds are the most likely to increase production, with 65% of farmers with herds of more than 200 cows intending to increase production. On the other hand, the smallest herds are the least likely to grow with only 22% of farmers with herds of between 10 and 49 cows intending to increase production.

There was also a strong relationship between farmer age and the intention to grow the business: 73% of farmers aged under 40 intended to increase production. In contrast, only 36% of farmers aged between 60 and 65 intended to increase production. Surprisingly, 50% of farmers aged over 65 indicated that they intended to increase production, although this relatively high rate may be influenced by the low number (<15) of respondents older than 65 in our survey.

A presence of a succession plan is linked to growth. 63% of farmers intending to increase production indicated they had a succession plan.

In terms of farming systems, 'housed all year round' systems were the most likely to grow with over 75% of these farmers intending to increase production. Grass based low concentrate systems were the least likely to grow, with only 48% of farms intending to increase production. Grass-based high-concentrates feeding systems were slightly above average in terms of intentions to expand with 55% intending to increase production.

Farms with block calving systems are more likely to increase production than those calving all year round. Of the block calving respondents, 64% of spring and autumn, 59% of mainly autumn and 58% of mainly spring calving herds intend to increase production. In contrast, just 49% of the calving all year round respondents intend to grow.

The type of milk contract farms were on also appears to have had an influence on the intention to increase milk production. From the data, 73% of farms on aligned contracts intend to increase production, which highlights the confidence provided by these contracts for farmers to invest and grow.

Farms on liquid, manufacturing and balancing based contracts showed similar levels of intention to increase production at 50%, 53% and 57% respectively.

5.3 Staying the Same

In the survey 38% of farmers indicated that they do not intend to change their production levels in the next five years.

Smaller herds were the most likely to stay the same. According to the data, 50% of farmers in the 10 – 49 cow category intend to maintain milk production with 30% of all farmers in the 500+ cow herd category planning to maintain production. In total, over 60% of the farmers that intend to stay the same had herds of between 50 and 150 cows.

There was a relationship between age and intention to maintain milk production at current levels. Only 24% of farmers aged under 40 intended to 'stay the same'. This figure increased to 50% for farmers aged 65 years of age or more.

The absence of a succession plan seems to correspond to those with the intention of maintaining current milk production levels.

Farms with housed all year round and spring calving systems were most likely to maintain production levels with 41% and 39% of these farms intending to ‘stay the same’, respectively. Spring and autumn, and mainly autumn calving herds were less likely to maintain production levels. Only 25% of autumn and 27% of spring and autumn herds intended to stay the same.

Herds with liquid or manufacturing contracts were most likely to ‘stay the same’, at 40% and 39% respectively. Only 18% of herds on aligned contracts were likely to maintain production at current levels, with 73% intending to increase production.

5.4 Exits

In our survey, only 4% of all dairy farmers intend to exit the industry over the next five years. From the responses received these are likely to be:

- Farmers aged 60 to 65 years old
- Autumn calving herds
- Farms on ‘balancing’ or ‘other’ contracts

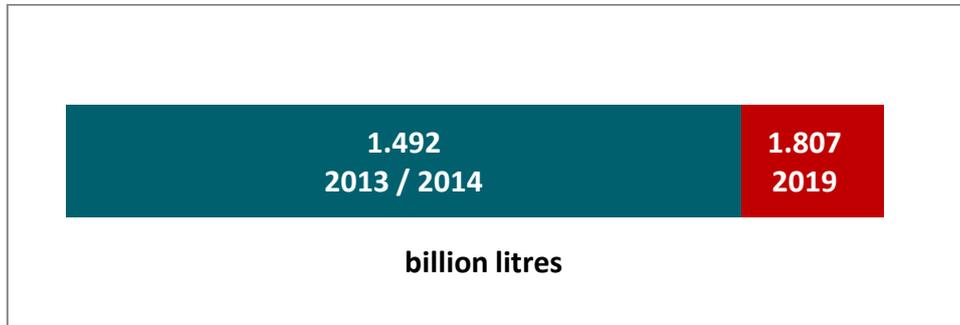
Table 3: Summary Of Farmer Intentions By Herd Size

% By Herd Size						
Herd size						
	10 - 49	50 - 99	100 - 149	150 - 199	200 - 299	500+
Increase	22%	45%	51.7%	58.8%	64.5%	65.3%
Decrease	9%	<1%	1.3%	0.0%	0.5%	0.0%
Stay same	50%	41%	39.9%	38.5%	30.5%	30.4%
Exit	15%	7	2.9%	0.9%	0.5%	0.0%
Don't know	4%	8%	4.2%	1.8%	4.0%	4.3%

Almost 80% of all farmers intending to exit the industry had herds of less than 99 cows. Farmers with between 10 and 49 cows had the highest intentions of exiting the industry with 15% intending to do so within the next five years. At the other end of the scale, no farmers with herds of greater than 500 cows intended to exit the industry, and of the 200 – 499 herd size group less than 1% of farmers intended to exit the industry. This result also reflects the succession plans (or lack of) in place.

5.5 Production Estimates and Forecasts 2013/14

Fig 11: Current And Future Milk Production In Wales



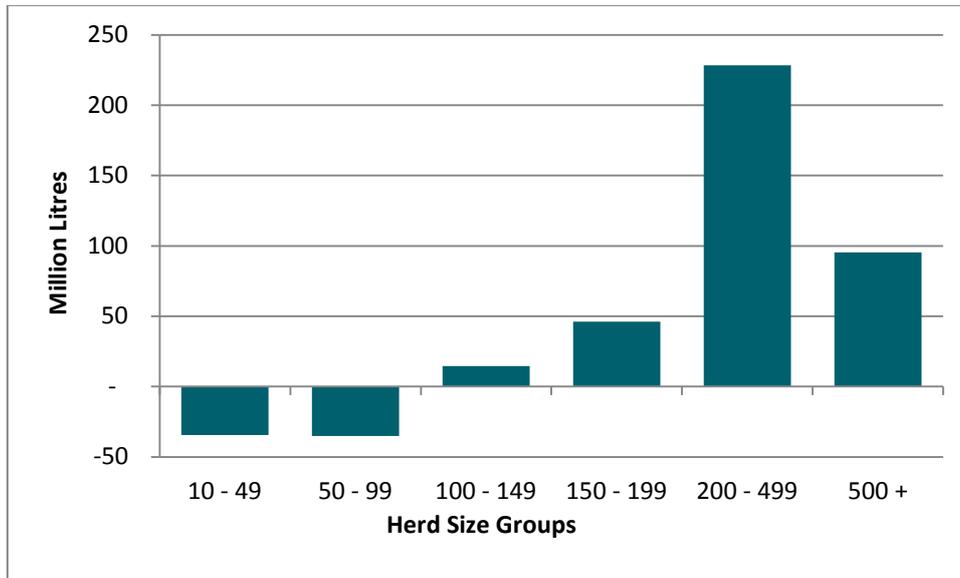
Data from our survey suggests that milk production in 2013/2014 was around 1.5bn litres. Figures from the RPA indicate that production has been significantly higher at 1.67 billion litres⁷.

Based on estimates given by farmers regarding their business’ milk production levels in five years time, we calculate that Wales will produce just over 1.8 billion litres in 2019, an increase of 20% over the next five year period.

It is important to note that this forecast of 1.8 billion litres is based on information provided by the respondents to our survey, conducted in the first few months of 2014. Taking the latest RPA figures for 2013/14, Welsh milk supply into account, the actual milk supply in five years time is more likely to be between 1.8 and 2.0 billion litres, assuming relatively benign dairy and feed market conditions prevail.

⁷ A possible explanation for this is that our survey results have underestimated production volumes due to farmers basing their current production estimates on last year’s milk volume (which was a particularly poor season)

Fig 12: Additional Production By Herd Size



The chart above shows, most of this additional milk (85%) will come from farms with over 200 cows and 25% of that increase will come from farms with more than 500 cows.

The above figures are consistent with other data from Precision Prospecting’s work across the UK, which suggests that increased production will be created largely by a greater proportion of cows being managed by ‘bigger farmers’ producing more milk per cow.

5.6 Implications for the Processing Sector

The expected increase in milk production identified in this report (c.300 million litres) over the next five years is the equivalent to an increase in production of roughly 30,000 tonnes of cheese. To put this in context, that tonnage is approximately 13% of current GB cheddar cheese consumption per annum.

A study of Welsh dairy processors, produced by Promar, in early 2014 found that many Welsh processors were interested in expanding their production. Many processors were either increasing outright capacity, or improving supporting infrastructure to make their plants more efficient.

Feedback from the survey also identified that only one major Welsh processor claimed to be working at full capacity⁸. Based on these findings it appears that, in theory at least, the

⁸ We acknowledge that full capacity is a difficult term to define – a peak milk capacity could be very different to mid-season capacity for a processor. A minor change in a rate limiting factor (i.e. working a double shift) could significantly increase the capacity of the plant. Milk transport economics also play a big part. Even if the overall Welsh industry has spare processing capacity, it may still be more economic to build new processing capacity, rather than transport milk from a production surplus area to a distant processing site with spare capacity

expected increase in milk production could be absorbed by existing milk processing plants in Wales.

In reality, for most dairy companies, it is not so much a question of how much milk is available, but an issue of what margin they can process or sell the milk for. Companies with the right business model should be able to pay a competitive price to secure all the milk they need, as well as make a profit from the products they sell.

Processing capacity is therefore about two issues – actual physical capacity to process milk to products and capacity in terms of the right products, brands and ultimately customers to sell those products to (at a profitable price).

Other parts of Europe, such as Ireland and France, have seen significant investments recently in new processing capacity – typically milk powder plants such as the Sodial/Synutra JV in Brittany (this plant alone has a reported capacity of up to 100,000 tonnes/year or the equivalent of 1 billion litres of milk per year) or the Isigny St Mere infant formula plant. These projects suggests that there are clearly some investors who have the confidence and belief in their models to make such investments.

In Wales, the positive growth shown by producers is very encouraging, but it may take a very large investment in processing capacity to give Welsh farmers real confidence that there is long-term demand for significant increases in milk production.

6. FARM INVESTMENT

6.1 Capital Expenditure Over the Past Five Years

Over the last five years, the main spend on farms has been the purchase of land with expenditure ranging from £90,000 to £1,000,000. This investment has mainly been undertaken by businesses with more than 50 cows, however no link could be found between the scale of investment and herd size. The other capital expenditure key messages are:

- Since 2010, capital investment within the sector has been relatively low with the largest investments being undertaken in 2011 and 2012 by those with herds of between 100 and 150 cows
- Expenditure on land has been the main category of spend every year since 2010

Fig 13: Average Spend On Expansion In The Past Five Years

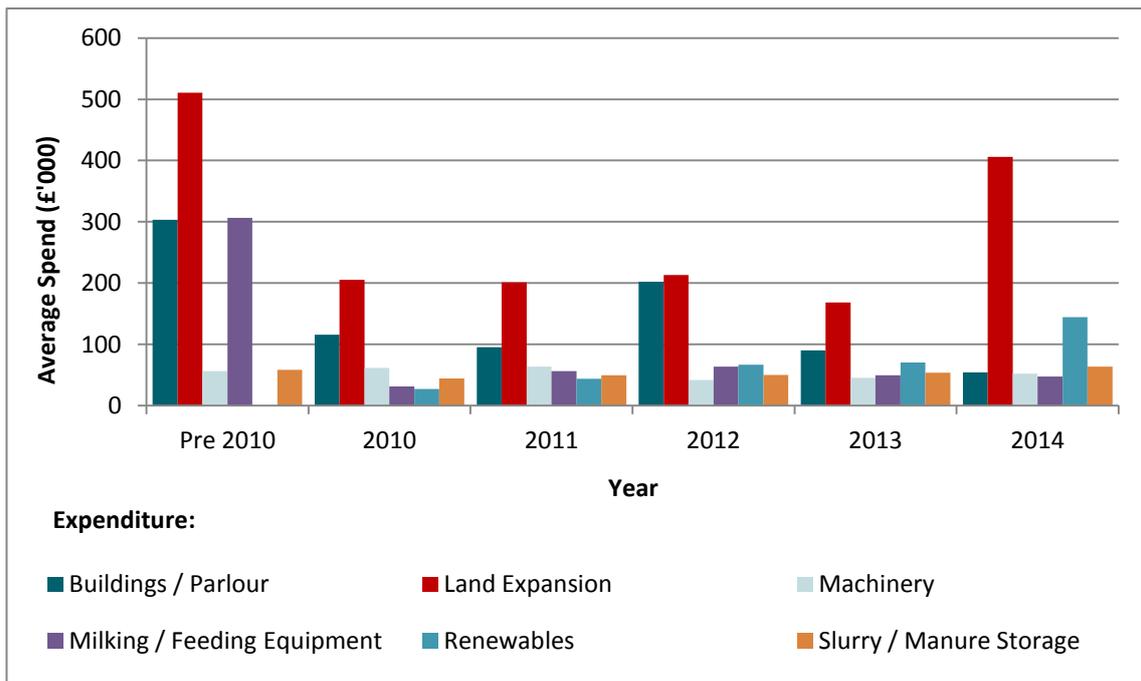
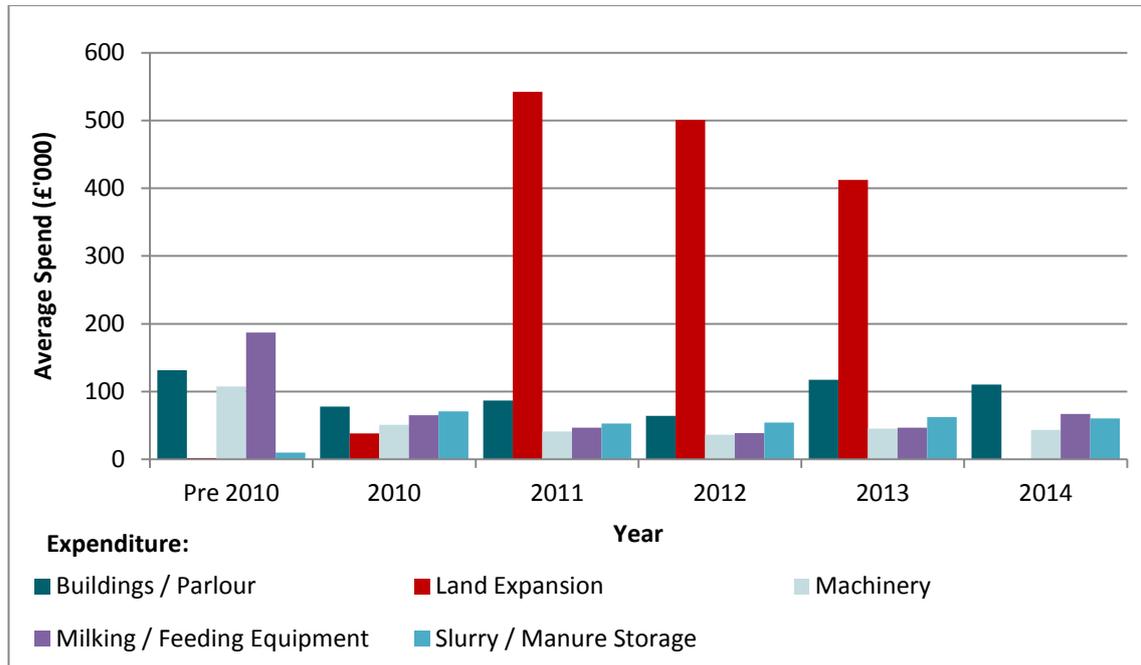


Fig 14: Capital Spend On Replacements In The Last Five Years



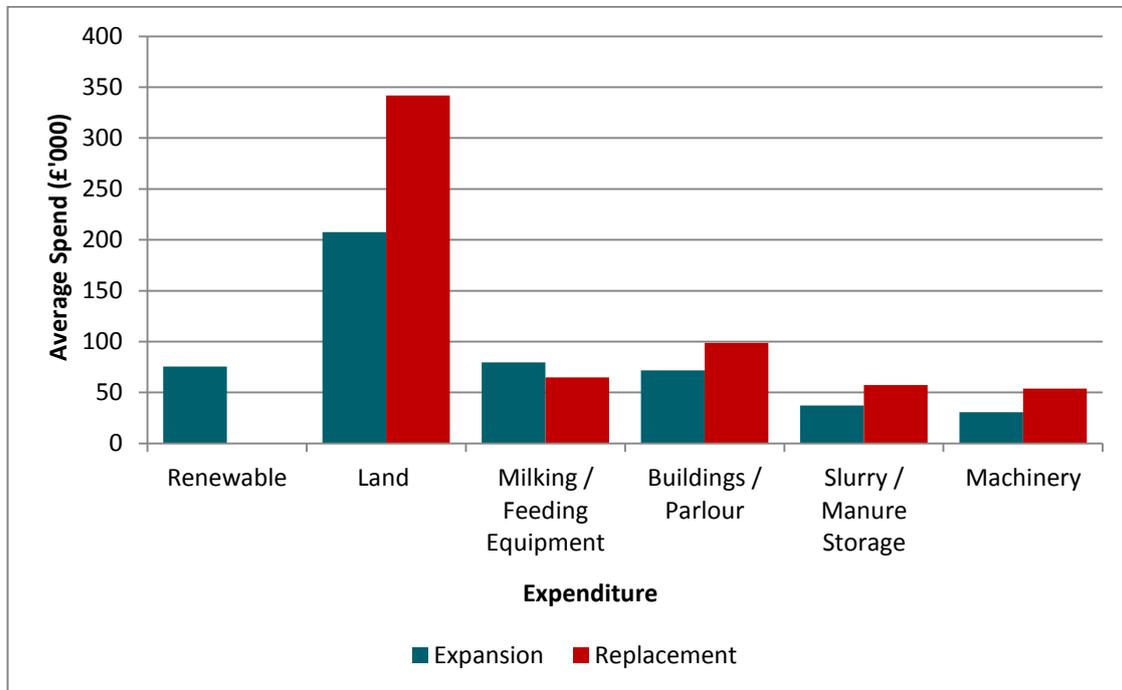
Based on information gathered in our survey, 50% of the respondents have invested less than £100,000 in their business over the past five years, which is relatively low considering the high capital costs of maintaining a modern dairy unit. The majority of those that had invested more heavily were predominantly larger herds with over 200 cows.

Table 4: Summary Of Investment Over The Past Five Years

Investment	Respondents	Herd Size
Nil	6%	
Less than £50,000	25%	This applies to all herds
£50,000 - £100,000	24%	This level of investment was seen amongst all herds with over 50 cows
£150,000 - £250,000	10%	Within this expenditure bracket, 34% had 200 cows or more and 30% had between 100 and 150 cows
£250,000 - £500,000	10%	44% had 200 cows or more and 42% had between 100 and 200 cows.
£500,000+	8%	Includes some with a herd size of between 100 and 200 cows but the majority with this level of expenditure (50%) had over 200 cows
Did not wish to disclose	17%	

6.2 Planned Investment Over The Next Five Years

Fig 15: Planned Future Expenditure



The intention for investment over the next five years indicates that the majority of farmers (62%) intend to invest capital to support their businesses; however, 25% had no planned date for any future investment. This suggests these farmers either have no plan or the plan is based on investment when capital becomes available. 13% had no intention to invest any capital.

Over the next two years, the indication is that the majority of the expenditure will be prioritised on buildings and parlours followed by land and manure storage. The majority of farms that intend to invest in land are those that have 50-150 cows (48%) and those with 150-500 cows (41%).

The survey responses indicate that investing in machinery isn't a priority and of those that do intend to invest, 84% will be within herds of between 50 and 150 cows.

The key messages on plans for investment are:

- Only 6.4% of dairy farmers have no intention to invest in the next five years and, of those, 50% have herds of between 50 and 100 cows. This is much lower than in the rest of GB as the DairyCo 2014 Farmer Intentions Survey reported that 37% of British farmers intend to invest nothing in their business while 25% were undecided

- The majority of planned investment is proposed over the next three years
- 58% of proposed investment will be made by farmers with herds of between 50 and 150 cows, of which 37.7% will be invested on buildings, 13.4% on parlours, 13% on manure storage, 13% on land, 11.3% on plant and machinery, 6.4% on cubicles and 5.2% on other investment
- 35.6% of proposed investment will be by farmers with between 150 and 500 cows, of which 34.9% plan to invest in buildings, 16.2% on parlours, 14.5% on land, 11.0% on manure storage, 3.4% on cubicles and 1.1% on plant and machinery with other investments at 18.9%. This would confirm that larger units are more focused on investment on infrastructure, as opposed to plant and machinery
- The planned cost of future investment in different areas is shown in Table 5 below

Table 5: Intended Investment On Replacement

Intended Investment (average £ per annum)						
	Herd Size					
	10 – 49	50 – 99	100 – 149	150 – 199	200 – 499	500+
Buildings/Parlours	£22,500	£67,000	£86,400	£66,900	£116,900	£375,000
Milking Equipment		£78,800	£38,800	£61,000	£115,800	£100,000
Slurry		£49,400	£67,800	£75,000	£73,000	£45,000
Machinery	£36,000	£15,300	£31,700	£4,600	£98,700	£53,700
Land		£275,000	£450,000			

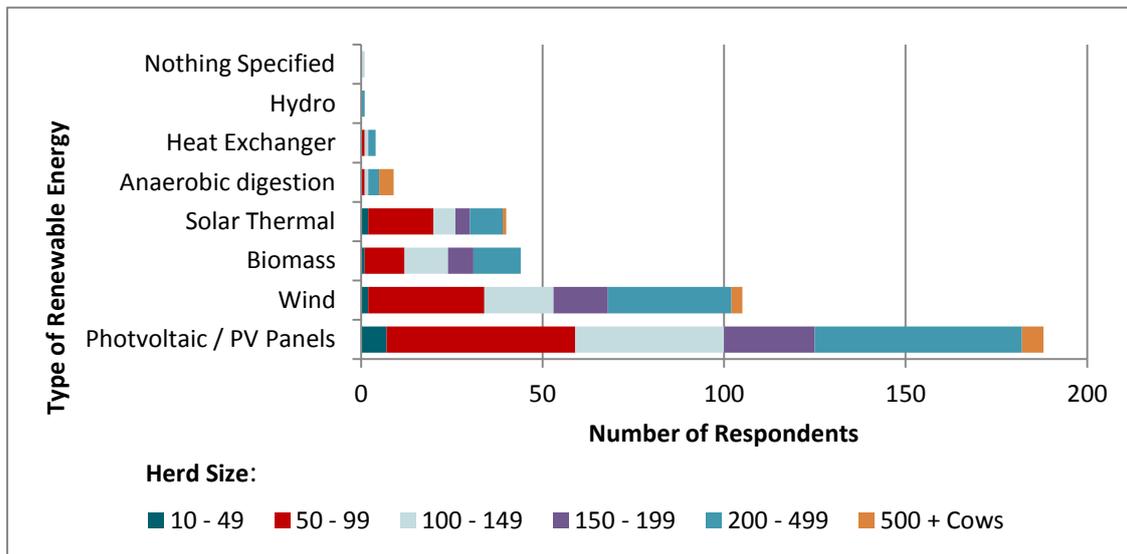
Table 6: Intended Investment On Expansion

Intended Investment (average £ per annum)						
	Herd Size					
	10 – 49	50 – 99	100 – 149	150 – 199	200 – 499	500+
Buildings/Parlours	£25,000	£39,600	£58,900	£115,000	£82,000	£240,000
Milking Equipment		£15,000	£58,600	£93,000	£231,000	
Slurry	£5,000	£24,000	£47,600	£46,500	£48,600	£97,000
Machinery		£11,600	£27,000	£45,000	£40,000	£100,000
Land		£140,900	£105,800	£413,500	£224,000	£110,000
Renewables	£50,500	£63,900	£32,900	£177,600	£89,300	£612,000

The survey shows that 24.4% of Welsh dairy farms have invested in some form of renewable energy, during the past five years, to support their dairy businesses. The survey also indicates that the focus of expenditure over the past five years has been on PV panels and wind power, followed by biomass or solar thermal. The other points to note are as follows:

- 24.4% have introduced some form of renewable energy, whilst 75.6% have yet to engage with renewable technology; of those who have not engaged, 14% of them indicate that they do intend to invest in renewable energy within the next five years
- Those with herds of between 200 and 500 cows have invested more in some form of renewable energy than any other group, followed by the 50 to 100 (cow) group and then closely followed by the 100 to 150 (cow) group

Fig 16: Investment In Renewable Energy By Herd Size



- The most popular form of investment has been in the installation of PV panels, accounting for 57.8% of investment. This has been the most popular choice of renewable energy with all the respondents, irrespective of herd size
- The second most popular investment is in wind power which accounts for 32.3% of those that have invested. The greatest involvement being at both ends of the scale (50 to 100 cows and 200 to 500 cows)
- Of those who have invested, 25.5% have either invested in biomass (13.4%) or in solar thermal (12.1%)
- The responses to future investment plans over the next five years indicate that Welsh dairy farmers plan to invest sums ranging between £50,000 and £612,000 on renewable energy depending on herd size. The highest investment is being made by

those with over 500 cows, although 150 to 200 cow herds have an investment plan of £177,000 on average. The range and scale of renewable technology available is highlighted by the wide range of proposed on farm investment of between £1,000 and £1,200,000

7. CONSTRAINTS TO DAIRY FARMING IN WALES

Respondents were asked to rank, on a scale of 1 to 10, which issues they felt were the greatest constraint to their businesses. Across all herd sizes TB was ranked as the greatest constraint, as Wales has been badly affected by this disease. As well as being the greatest constraint across all herd sizes, it was also ranked as the biggest constraint across all regions and age groups. With the exception of TB, the concern regarding other farming constraints varied between herd sizes.

Those with herd sizes over 100 cows rated land availability and price volatility as their greatest area of concern.

Fig 17: On-Farm Constraints

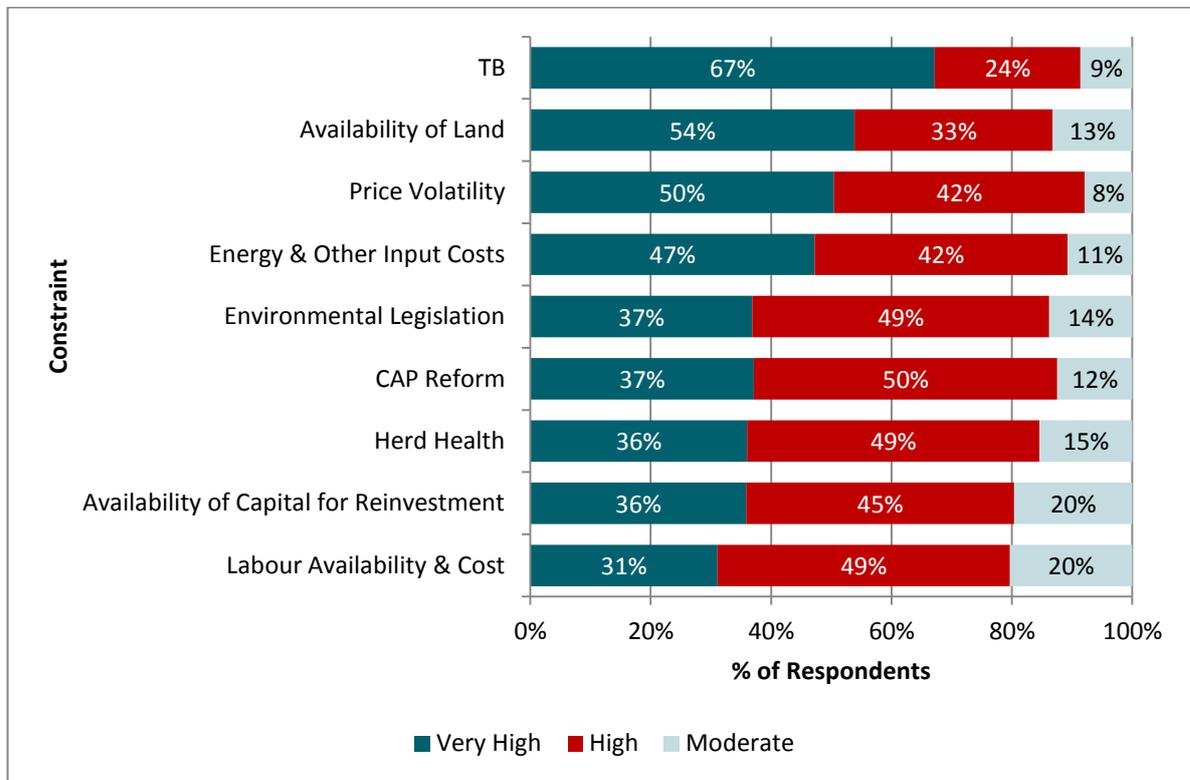


Table 7: Greatest Constraints On-Farm By Respondent’s Herd Size

	Herd size						
	10 - 49	50 - 99	100 - 149	150 - 199	200 - 499	500+	
1	TB	TB	TB	TB	TB	TB	Very High Constraint
2	Price volatility	Energy & other input costs	Availability of land	Availability of land	Availability of land	Herd health	
3	Energy & other input costs	Price volatility	Price volatility	Price volatility	Price volatility	Environmental legislation	
4	CAP Reform	Availability of land	Energy & other input costs	Herd health	Energy & other input costs	Energy & other input costs	High Constraint
5	Availability of capital for reinvestment	CAP Reform	Environmental legislation	Energy & other input costs	Labour availability and cost	Labour availability and cost	
6	Herd Health	Environmental legislation	CAP Reform	Environmental legislation	Environmental legislation	Availability of Land	
7	Availability of land	Herd health	Availability of capital for reinvestment	Availability of capital for reinvestment	Herd health	CAP Reform	Moderate Constraint
8	Labour availability and cost	Availability of capital for reinvestment	Labour availability and cost	CAP Reform	Availability of capital for reinvestment	Availability of capital for reinvestment	
9	Environmental legislation	Labour availability and cost	Herd health	Labour availability and cost	CAP Reform	Price volatility	

For the farmers with larger herds of over 500 cows, the key constraints are herd health and environmental regulations.

As detailed in Table 7 above, the constraints that were ranked as being least important for most farmers were labour, capital and herd health. For those with less than 100 cows, labour was of low concern, however, as mentioned earlier, this could be because workers on these farms tend to be family members and so availability is of a lesser concern.

Farms with less than 50 cows have ranked environmental regulations at the lower end of the constraint scale.

Farmers with herds of over 500 cows expressed that capital availability was not their main constraint and, in contrast to all other herd sizes that perceive price volatility as a key constraint, these large herds rated it of least importance. This suggests that large herds are probably more focussed on their cost of production and profitability as opposed to price received per litre.

The key messages on constraints on Welsh dairy farmers based on this survey are:

- TB was the most important issue on Welsh dairy farms, regardless of respondent profile
- Milk price volatility was an area of concern for those with herd sizes below 500 cows
- All herds over 100 cows considered availability of land as a major constraint
- For those with herds of over 500 cows, herd health was of key importance along with the effects of environmental legislation
- On farms with less than 200 cows, labour was an area of lower concern
- For those with herds of over 500 cows, CAP reform and price volatility were of least importance

8. TRAINING AND ADVICE

Training and advice events are popular with Welsh dairy farmers with 71% of respondents having attended at least one event in the last year:

- 44% attended an on-farm event
- 43% attended a discussion group
- 41% attended an open meeting
- 20% gained one-to-one advice and support
- 15% attended a workshop

There is a direct correlation between attendance at events and herd size with farmers with herds of over 200 cows attending more than those with less than 200 cows. Over half of farmers with herds of less than 50 cows did not attend any event during the past 12 months, whereas 96% of those with over 500 cows attended an event over the same period. Events were attended by respondents of all ages, with attendance by those under 40 higher than for other age groups.

The most popular type of events are those held on-farm and discussion groups. This is the case across the majority of age groups. Those aged over 60, however, attended more open meetings than other type of events.

Discussion groups and open meetings were equally popular, however, one-to-one advice and support along with workshops, were somewhat less favoured. Opinion is very similar about the help that these events bring to future business profitability. However, discussion groups are rated slightly more favourably than on-farm events. This suggests that while on-farm events are highly attended, discussion groups with peer group learning are perceived as more beneficial. This is illustrated by the response to the question regarding what would help respondents farm more profitably in the future. 26% of respondents expressed that they have no intention of attending any type of training and advice events.

Fig 18: Attendance Of Events In The Past 12 Months, By Herd Size

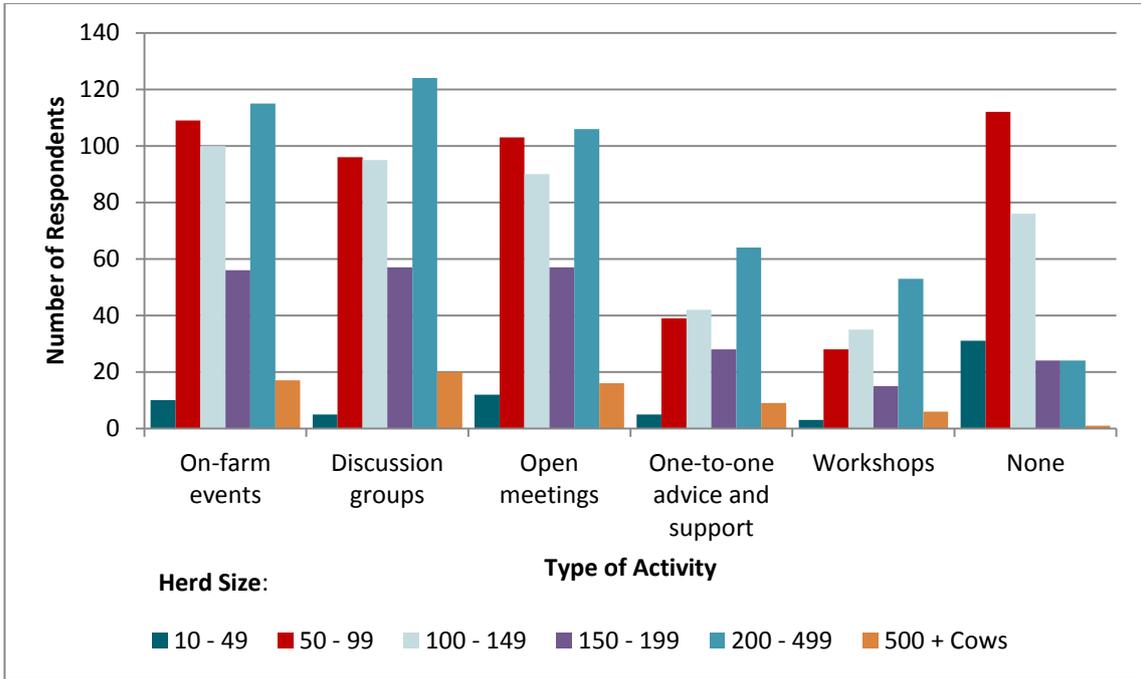


Fig 19: Future Attendance Of Events, By Herd Size

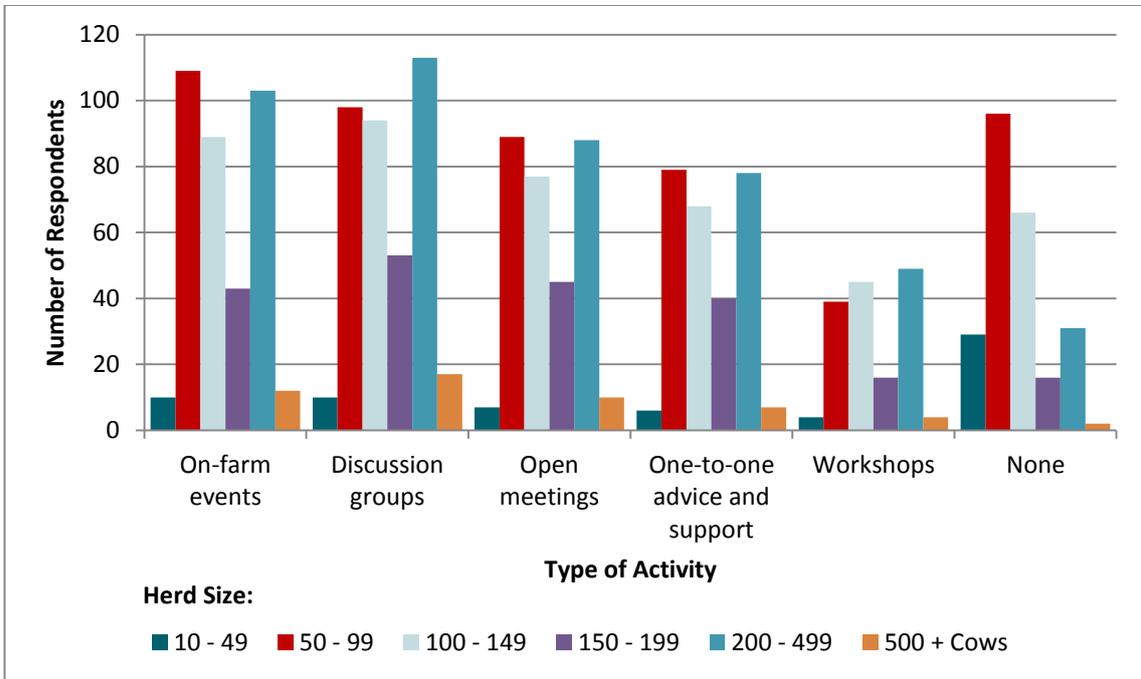


Table 8: Training Needs By Herd Size

	Herd size						
	10 - 49	50 - 99	100 - 149	150 - 199	200 - 499	500+	
1	Fertility and breeding	Fertility and breeding	Fertility and breeding	Fertility and breeding	Grass & forage	Grass & forage	Very High Demand
2	Nutrition	Grass & forage	Grass & forage	Animal health	Fertility & breeding	Fertility & breeding	
3	Animal health	Animal health	Animal health	Nutrition	Business planning & financial management	Business planning & financial management	
4	Grass & forage	Nutrition	Nutrition	Grass & forage	Nutrition	Labour / staff management	High Demand
5	New technology	Business planning & financial management	Business planning & financial management	Business planning & financial management	Animal health	Animal health	
6	Environment	Collaboration / succession	New technology	New technology	New technology	Nutrition	
7	Business planning & financial management	New technology	Market understanding	Collaboration / succession	Labour / staff management	New technology	
8	Market understanding	Environment	Collaboration / succession	Labour / staff management	Collaboration / succession	Collaboration / succession	Moderate Demand
9	Collaboration / Succession	Labour / staff management	Labour / staff management	Environment	Environment	Environment	
10	Labour / staff management	Market understanding	Environment	Market understanding	Market understanding	Market understanding	

Respondents were asked which area of advice or training would result in the most immediate improvement to their business. Responses were somewhat similar across business sizes, with fertility and breeding a key area for all. Farms with more than 200 cows prioritised grass and forage above breeding and fertility whereas smaller herds had the latter as a priority.

For farms with fewer than 200 cows, animal health was also a key topic, however for those with herds of over 200 cows, business planning and financial management was of utmost importance. It is clear that, for these herds, requirements for business training was much more popular with topics such as business planning and financial management, and labour and staff management all ranking highly.

The opposite applies to farmers with smaller herds where labour and staff management was one of the areas ranked of least importance. For smaller herds, this is linked to the high level of family labour, so staffing is not their prevalent issue.

Across all herd sizes, collaboration and succession, market understanding and environment were all seen as topics that were not of immediate importance for training or advice. The majority of farmers with herd sizes of more than 150 cows, ranked the environment and market understanding as least important.

Table 9: Training Needs By Age Of Respondent

	Age				
	< 40	40 - 49	50 - 59	> 60	
1	Grass & forage	Fertility and breeding	Fertility and breeding	Fertility and breeding	Very High Demand
2	Fertility & breeding	Grass & forage	Grass & forage	Grass & forage	
3	Animal health	Nutrition	Animal health	Animal health	
4	Business Planning & Financial	Animal Health	Nutrition	Nutrition	High Demand
5	Nutrition	Business Planning & Financial	Business Planning & Financial	Business Planning & Financial	
6	New Technology	New Technology	New Technology	New Technology	
7	Labour / Staff Management	Collaboration / Succession	Collaboration / Succession	Environment	
7	Collaboration / succession	Labour / staff management	Environment	Collaboration / succession	Moderate Demand
8	Market understanding	Environment	Labour / staff management	Market understanding	
9	Environment	Market understanding	Market understanding	Labour / staff management	

Those aged 40 and below would like training in grass and forage, followed by fertility, however this is reversed for those aged over 40. Training in market understanding ranked low among all age groups, with labour also of limited importance for those over 40.

The key messages for training and advice, based on the survey are:

- Farmers across different herd sizes and ages would like to see more information on grass and forage along with fertility and breeding
- Larger herd sizes and younger farmers expressed an interest in more business management training/advice, in areas such as business planning and financial

management, along with labour and staff management

- Animal health and nutrition were also topics prioritised for training and advice
- Across all respondents, training in understanding the market, along with collaboration, succession and the environment was seen as a low priority