

My philosophy on being an employer

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Summary

- Almost half (47%) of all Irish cows are now milked in herds greater than 100 cows.
- Recruitment and retention of well trained and skilled farm operatives and managers will be the limiting factor for expansion for many farmers in the future.
- Dairy farming must be considered an attractive career option, provide competitive returns per hour worked and adequate time-off and a sustainable workload for everybody working on the farm.
- There is a requirement to reduce the workload on dairy farms through a combination of using labour efficient practices, improving farm infrastructure, and out-sourcing specific tasks.
- The principles of Lean management could be applied to dairy farms to increase efficiencies.
- The Irish dairy industry should develop a workplace action plan setting out clear targets and goals around employment practices on dairy farms.
- Planning and preparation for compact spring calving is essential to minimise the stress associated with the peak workload

Introduction

The future competitiveness and sustainability of the Irish dairy industry is dependent on four main pillars: (1) the availability of high genetic merit grass-based genetics; (2) high pasture productivity and utilisation at farm level; (3) farm systems that are sustainable - financially, socially and environmentally; and, (4) an adequate supply of highly skilled, well trained and highly motivated young dairy farmers. All four pillars are equally important, and therefore require equal emphasis if the dairy industry is to continue to develop. This paper deals specifically with pillar four i.e. the people aspect with particular emphasis on attracting, developing and retaining staff.

Current trends in dairy farm structures

Table 1 and Table 2 shows the number of dairy cows by herd size and number of dairy farms by herd size from 2005 to 2016, respectively using data from the CSO Farm Structure Survey 2005 to 2016 (Kelly *et al.*, 2017). The data shows that the number of dairy herds has remained relatively static over the last 6-years. The

number of 'new entrants' to dairying are replacing the number of dairy farmers who exit milk production.

Average herd size has increased from 45 cows in 2005 to 76 cows in 2016. Excluding dairy farms milking less than 30 cows (who can potentially double in herd size without requiring extra labour), the average herd size of the remaining 15,339 dairy herds in 2016 is 87 cows. Additionally, the proportion of cows in herds of greater than 100 cows has increased from 13% in 2005 to 47% in 2016. The number of dairy farms with herds greater than 100 cows has increased from 1,080 (4.5%) in 2005 to 4,262 (23%) in 2016. The average herd size for farmers in this category is now 155 cows.

Table 1. Number of dairy cows by herd size 2005 to 2016.

Herd size	2005	2007	2010	2013	2016
10 to 19 cows	35,180	24,640	30,780	25,290	20,595
20 to 29 cows	78,120	65,270	56,720	47,480	38,828
30 to 49 cows	294,100	252,750	194,450	171,640	142,922
50 to 99 cows	523,400	525,900	486,850	518,110	536,390
>than 100 cows	144,620	184,910	302,060	400,690	659,149
Total	1,081,960	1,058,210	1,070,860	1,163,200	1,397,884
Avg. herd size cows	48	52	58	64	76

Reference: Kelly *et al.*, 2017

Table 2. Number of dairy farm by herd size 2005 to 2016.

Herd size	2005	2007	2010	2013	2016
10 to 19 cows	2,390	1,700	2,110	1,730	1,437
20 to 29 cows	3,230	2,680	2,310	1,930	1,575
30 to 49 cows	7,550	6,480	4,910	4,330	3,589
50 to 99 cows	8,080	7,960	7,050	7,420	7,488
> than 100 cows	1,080	1,350	2,080	2,740	4,262
Total	23,820	21,320	18,460	18,150	18,351

Reference: Kelly *et al.*, 2017

This analysis shows that the structure of Irish dairy farms has changed significantly (since 2010 in particular) and that this is likely to continue. There has been a dramatic shift to larger herds over this time with a fourfold increase in both the number of cows being milked in herds of greater than 100 cows and the number of farmers milking herds of greater than 100 cows. This trend is likely to continue as indicated by national statistics of dairy young stock and from supplier surveys currently being carried out by some of the major milk processors.

The rapid increase of herds greater than 100 cows highlights a potential mismatch between the availability of family labour and the workload on farms. While the CSO Farm Structure Survey in 2013 highlighted that a large amount of family labour exists on dairy farms, there is no guarantee this labour exists especially on the farms milking greater than 100 cows where it is particularly needed, or that family labour is available at busy times in the season e.g. during calving in February and March. Hence there is a growing requirement for both full and part time employees to work on dairy farms.

A modelling exercise was carried out to predict the future people requirement of Irish dairying using data from the Farm Structure Survey 2013 and 2016. Assuming the national herd will grow to 1.6 million cows by 2025 then, even when accounting for improvements in labour efficiency, its predicted we will need over 6,000 people to enter the industry. This consists of 2,300 new employees and 3,900 future successors.

New Zealand approach to develop a high quality work environment on dairy farms

DairyNZ in association with the Federated Farmers of New Zealand have developed a Workplace Action Plan (<https://www.dairynz.co.nz/...workplace-action-plan/workplace-action-plan-employee>) to assist the dairy industry to adopt good workplace management practices which are essential to attract and retain good people. It sets out a number of targets and goals for the industry; some are minimum standards required to comply with the law. The Workplace Action Plan contains five pillars of good people management:

1. Balanced and productive work time

This deals mostly with appropriate work/life balance in terms of employees work time.

- are not likely to work more than 50 hours a week
- are not likely to work more than 10 hours a day
- are not likely to work more than 4 hours in any day before a break is taken
- have at least two consecutive days off in two weeks

2. Fair remuneration

This mostly deals with wages and salary rates.

- minimum wages or above are paid for all hours worked
- employment agreement are in place for all employees
- records of hours worked and wages paid are kept
- holidays and leave are recorded
- remuneration package typically includes a non-cash benefit
- formal accommodation agreement in place

3. Wellness, wellbeing and health and safety.

Dairy farms must be safe places of work.

- the workplace is physically safe, emotionally secure and free from bullying
- accommodation complies with legal requirements
- employees are engaged in setting and operating the farm health and safety plan
- staff have access to personal protective equipment where appropriate

4. Effective team culture

The dairy farm is an enjoyable place to work.

- there is good communication between employer and employees
- there is good communication between employees
- mutual respect and care is extended to all team members
- diversity is understood and respected

5. Rewarding career

Employees are encouraged to further career development.

- continuous improvement through on-going skills development
- employees have opportunity for personal growth and career development

The Workplace Action Plan includes actions that both DairyNZ and Federated Farmers will deliver and there is annual monitoring and reporting associated with each of the five pillars.

Retention on dairy farms

The recent and further planned expansion of the Irish dairy industry means that many farms have grown beyond the labour capacity of immediate family. Therefore, one of the challenges faced by many farmers is becoming an employer and working with short and long term hired non-family labour. Along with financial, business and

technical skills, farmers have identified people management skills as important skills to have to ensure successful expansion (Bewley et al. 2001, Hadley et al., 2002). Having good employment practices on dairy farms is essential to having a successful industry which attracts and retains good people. Retention refers to the efforts of an employer to create an enjoyable workplace, avoid employees leaving when it is preferred that they stay and reward and acknowledge good performance (Nettle et al., 2011). Anecdotal evidence would suggest that retention of employees is an issue on some Irish dairy farms. Replacing employees is costly and it is estimated that every time a business replaces a salaried employee it costs 6 to 9 months' salary on average. The difficulties in retaining employees in the agricultural sector globally centred on four key issues:

1. Poor working conditions;
2. Lack of career development and promotion opportunities;
3. Neglect in occupational health and safety;
4. Availability of alternative employment.

Source: Nettle *et al.*, 2011)

To overcome these issues suggested strategies include having flexible working hours, competitive wage and benefits such as bonuses and profit share and providing training. In 2018, it is predicted there will be full employment in Ireland coupled with increasing wages in other sectors there will be increased competition for skilled labour. Therefore dairy farmers will need to ensure that they are providing a quality workplace as it would be challenging to compete in terms of wages alone compared with other industries. In a study of work practices by Nettle et al. (2011) employees were influenced to stay with their employer because they experienced:

1. Higher than average pay
2. Flexible work hours
3. Limited weekend hours and very long shifts
4. Varied work
5. Training and development opportunities
6. Feedback and appreciation for a job well done
7. Individual attention to career development and mentoring
8. An enjoyable work environment with good facilities

Practices, such as effective work organisation and good communication, may improve employee satisfaction, thereby increasing the effectiveness of the labour input and increasing profitability of the farm business. This stands true when working with both family and non-family labour and also with others such as contractors in the farm business.

Work practices – Lean on Dairy Farms

Work practices that have been done routinely for years may no longer be suitable on a farm given the increased workload with extra cows. Making changes to how work

is done on the farm can save large amounts of time without any reduction in farm performance, and often with very little cost. A set of techniques that were developed by the automotive industry 30 years ago (Lean) have evolved and can be adapted to any sector that has people, processes and problems. These techniques seek to identify and remove unnecessary activities so that work requires less effort and capital and improves safety. It can provide a clear, structured management system for the farm to deliver productivity gain and sustain them over time. Some of techniques used are:

Standard work

This technique involves mapping out a set of steps or listing instructions for specific tasks for example how to operate the milking machine or how to operate the feeders in the parlour. These instructions should be visible to everyone and preferably posted where the task takes place. Well-written instructions simplify tasks, improve communication, reduce training time, and improve work consistency. The overall farm business benefits from consistent work performance and predictable results regardless of who is completing the task giving the owner confidence in a job being done correctly.

Visual controls

Communication of information on farm is necessary to ensure that everyone is clear regarding what the business needs to achieve on any given day. Unless this information is relevant and easy to see, it will not be used. White boards are one method of communicating the tasks for that day or week visually with employees. They should be placed somewhere that everyone has access to such as the dairy or farm office. A farm map with paddocks numbered and a list of key phone numbers should be available.

'A place for everything and everything its place'

This technique improves workplace efficiency and eliminates waste. The result is that the workplace becomes organised, work is done efficiently and safely, and problems are quickly found and eliminated. Briefly it involves focusing on one area such as workshop or milking parlour and taking a before photo. Tidy up the space by going through every item and removing any items that are not used or that are broken. If an item is used regularly then give it a permanent home near where it is used. Label the location or take a picture to show what it should look like. Once everything is sorted take an after photo and agree how to maintain the new organised area. Well organised workplaces reduce time spent looking for tools and improves safety on the farm.

'You can't manage what you don't measure'

Although dairy farmers use metrics and benchmarking to determine how well they are doing in animal and grass production and profitability, there are few commonly

used employment metrics. Measurement helps establish a baseline figure at a single point in time and gives the ability to identify any change into the future. Therefore, to become better employers, it is necessary to assess the factors associated with being an employer of choice. Figure 1 is a self-assessment tool for farmers to evaluate themselves as employers. There are 5 segments to the circle each representing a factor that is important to being a successful employer. Working from inside the circle to the outside each ring equates to 25% so the inside ring equates to 25% and the outer ring equals 100%. Each factor should be scored out of 100%. After completing the scorecard, areas of improvement will be easily identified and actions can be taken. For example a good employer regarding health and safety and people management is one who is achieving all four points in the wellness, wellbeing and health and safety and effective team culture pillars as outlined above. A good employer regarding labour efficiency is one who is achieving the points outlined under the balanced and productive work time pillar as well as having efficient work practices and labour efficient facilities on farm as outlined below. Regarding wages and benefits and career progression, a good employer is achieving the points outlined under the fair remuneration and rewarding career pillars. A great employer is one who is going over and above what a good employer does by ensuring their employees experience the eight work practices outlined by Nettle *et al.* (2011).

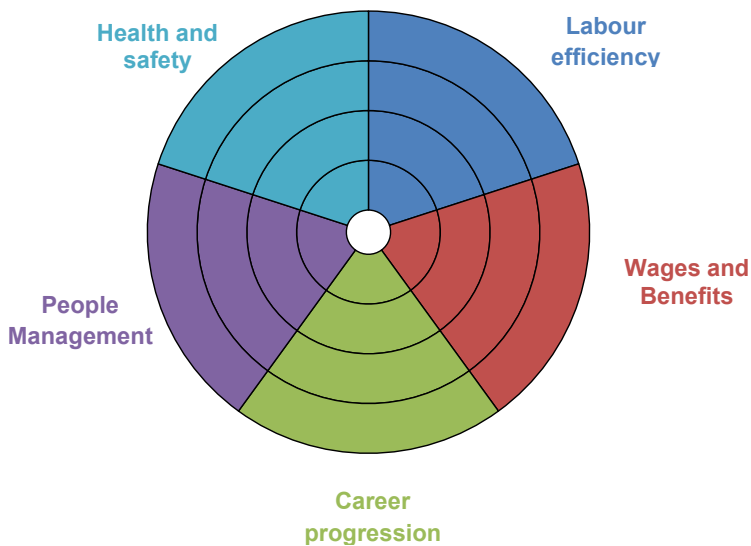


Figure 1. Employer self-assessment tool to assess employment skills,

How to achieve a sustainable workload

There are a variety of options to consider that will reduce the workload on any given farm. These can be broken into the following categories:

Changing work practices

Making changes to how work is done on the farm can save large amounts of time without any reduction in farm performance, and often with very little cost. Increased cows on farms may require changing work practices to save time. Examples of changes which can save time include:

- Once a day calf feeding from three weeks of age;
- Vaccine use in cows/calves to reduce animal health issues e.g. for scour or pneumonia;
- Night time feeding of dry cows during late pregnancy to increase the number calving during the day;
- Grazing cows in 36 hour blocks to avoid needing strip wires during the main grazing season;
- Only milk cows once daily for the first three weeks of the calving season.

Making the farm set-up more labour efficient

Facilities have a major influence on labour efficiency. Milking is the main task on a dairy farm and typically consumes over 30% of total labour input. Therefore the milking parlour set-up has a large influence on farm labour efficiency. Cow flow into and out of the parlour and the number of rows to be milked are key considerations. Calf rearing facilities tend to be the least modern on many farms, and this has very negative effects on labour efficiency as it increases the workload during the busiest time of the year. Having tractor access to clean out pens, not having to carry milk long distances to calves and being able to rear calves in batches of 10 or more are all essential on a modern dairy farm.

Out-sourcing work

Many of the most labour efficient farmers reduce the hours of work for themselves and their farm team by out-sourcing work. On larger scale farms, this can mean all machinery work being done by contractors (fertilizer, slurry, silage, winter feeding etc.) and on smaller scale farms this might involve using contractors at particularly busy times of the year (e.g. slurry and fertilizer spreading in spring). Many farmers rule out this option due to the cost of the service but fail to consider the huge potential gains – your time as the manager of your business is extremely valuable, especially in the first half of the year during calving and breeding. Ensuring the job gets done on time is another important benefit. For example, a delay in getting fertilizer out in spring can be a huge cost in terms of lost grass growth. Savings on machinery running costs are another big positive; some farms using all contractors for machinery work have a lower contracting bill than the combined contracting and machinery running bills of farms with their own machinery.

There are also many other options to out-source work. Contract heifer rearing is becoming more and more popular, and an increasing number of farmers are now getting calves contract reared from two weeks of age to further reduce the workload during the spring. Contractors can be used for almost any job on the farm from fencing to power hosing sheds etc. Out sourcing work is an ideal method for any farmer to reduce their workload.

Hiring full or part time help

As dairy farms continue to increase in scale, there will be a greater requirement for part time and full time help. While the workload on many farms was manageable for one person up to the recent post-quota expansion, increased scale and the seasonality of the workload means that extra help is needed. The key change when becoming an employer is that the farm is now a place of work for another person. This is where the farm set-up becomes more important: the easier that jobs are to do, the better they are likely to be done.

How many cows can one person sustainably manage?

When discussing labour efficiency, a question is often asked: how many cows can one person manage? The first point to make is there should be no such thing as a one man farm. Every person needs a break from work and so every dairy farm business should have people available to offer the farmer time away from the farm, regardless of scale. This may be family members or paid relief help.

Cows per person are influenced by two things:

- How many hours of work does each cow require during the year?
- How many hours is the person willing to work?

Using data from previous Teagasc labour research, this relationship is illustrated in Table 3. Based on the national average herd size (75 cows in 2016), average labour efficiency nationally is estimated to be 40 hours per cow per year. This includes the workload associated with rearing replacement heifers for the farm.

Farms operating very labour efficient systems (e.g. those with labour efficient set-ups, contract rearing heifers and contracting out machinery work etc.) are achieving efficiency levels of less than 20 hours per cow per year. As can be seen from Table 3, this difference in labour efficiency could easily allow one person manage another 60 cows without doing any extra work.

The other key variable is how many hours is a person willing to work? Achieving high levels of labour efficiency by simply working longer hours is unsustainable. The farm will look impressive using the key performance indicator of cows per person, but chances are that profit is not being maximised as people are too busy working and management decisions suffer. Combining current national average levels of labour efficiency with maintaining a reasonable working week of 50 hours per week over 48

weeks would mean that one person can effectively manage 60 cows. While this analysis looks at annual labour efficiency, another key consideration is the workload at different times of the year, especially in the spring.

Table 3. The effect of labour efficiency (hours/cow/year) and the duration of the working week on the number of cows that one person can manage.

	Hours per cow per year			
Hours per person per week	25	30	35	40
50	96	80	69	60
54	104	87	74	65
58	112	93	80	70

Features of labour efficient dairy farms

- Simple farm system that can be easily communicated and operated by others.
- Minimum number of enterprises on the farm (e.g., sale of all surplus calves and contract rearing replacements).
- Suitable cow type that doesn't require individual attention i.e. high EBI genetics.
- An appropriate calving date and stocking rate for the farm that minimises the need for supplementary feed (reducing both workload and farm costs).
- Good grazing infrastructure that facilitates easy movement of animals to and from grazing by a single operator.
- Good milking infrastructure in terms of number of cows per milking unit, backing gate, drafting and cow flow.
- Adequate well organised farmyard infrastructure that facilitates the easy movement of stock, particularly at calving and calf rearing.

Conclusion

Based on international studies, difficulties in retaining employees in the dairy sector have centred on four key issues namely: inadequate working conditions, lack of clear career development and promotion opportunities, neglect of occupational health and safety; and the availability of alternative employment. The suggested response to this should include: setting clear HR policies; offering a competitive remuneration package, not just covering wages but including benefits and bonuses or profit sharing plans; flexible scheduling of working hours plus the provision of excellent training and career advancement opportunities.