Agriculture and Food Development Authority

Teagasc National Dairy Conference 2015

8th & 9th December 2015

Lyrath Estate Hotel, Co. Kilkenny

Foreword

Welcome to the Teagasc National Dairy Conference 2015 and our official event programme.

The past 12 months has seen the removal of EU Milk Quotas, an increase in national milk production and a decrease in milk price (although this drop in price is more to do with global supply and demand than the removal of quotas per se). With these events in mind, the theme for this year's conference is 'Managing in a New Era'.

Technologies which dairy farmers can use to improve their farm business performance are the focus of this year's event. Adoption of these technologies by farmers will allow them remain profitable and sustainable into the future.

This year's conference takes a new format to previous years. Firstly, it will be held over two days, with attendees having the option of attending on either or both of the days. Secondly, we have identified four high quality keynote speakers from diverse fields.

The most innovative aspect of this year's conference is the inclusion of break-out sessions on both afternoons. Attendees can choose to attend three break-out sessions from a list of seven on each afternoon. The break-out sessions focus on six key topics: grassland, breeding/ herd fertility, finances, animal health, labour and systems. All of these sessions will be interactive, with plenty of time for audience involvement.

There will also be a social aspect to this year's event with a Conference Dinner to be held at 8.00pm on the evening of December 8th.

Tom O'Dwyer
Head of Dairy KT & Chair of Organising Committee

Programme

Tuesday, 8th December 2015	
9.45am	Introductions and Welcome *Tom O'Dwyer, Head of Dairy KT, Teagasc*
Session 1: Managing Business Growth **Chairperson:** *Dr. Noel Cawley, Chairperson, Teagasc Authority*	
10.00am	Outlook for Dairy *Mark Voorbergen, Voorbergen Consultancy*
10.50am	Measuring the financial well-being of a growing business *Sean Gallagher, Entrepreneur & Business Writer with the Sunday Independent*
11.40am	Discussion
12.00pm	Lunch
Session 2: Break-out Sessions (choose three from list of seven)	
1.15pm	Move to break-out session venue
1.30pm	Break-out session A
2.20pm	Move to break-out session venue
2.30pm	Break-out session B
3.20pm	Tea/coffee and move to break-out session venue
3.50pm	Break-out session C

Conference Dinner including guest speaker Colm McCarthy, UCD, hosted by John Moloney, Teagasc Regional Manager, Kilkenny/Waterford

Wednesday, 9th December 2015	
9.45am	Introductions and Welcome *Tom O'Dwyer, Head of Dairy KT, Teagasc*
Session 3: Managing yourself and others **Chairperson:** *Prof. Gerry Boyle, Teagasc Director*	
10.00am	Managing yourself successfully *Declan Coyle, Andec Consulting*
10.50am	Managing others successfully *Mark Paine, DairyNZ*
11.40am	Discussion
12.00pm	Lunch
Session 4: Break-out Sessions (choose three from list of seven)	
1.15pm	Move to break-out session venue
1.30pm	Break-out session A
2.20pm	Move to break-out session venue
2.30pm	Break-out session B
3.20pm	Tea/coffee and move to break-out session venue
3.50pm	Break-out session C

Contents

Outlook for the Global Dairy Market

Mark Voorbergen, Voorbergen Consultancy

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Mark advises dairy companies in the areas of markets, strategy and finance. He built a large part of his expertise during his 12 years of working for Rabobank International where he specialised in providing financial and strategic services to the world's largest milk processors. In 2011, he set up his own advisory company. His experience in the international dairy industry and involvement with every step of the value chain allows him to: understand the fundamental drivers in the international dairy market; translate these changes into strategic opportunities and threats for individual processors; and support companies in their quest for financial solutions to facilitate strategic adjustments.

Summary

- Market prices on the global market in the final weeks of 2015 provide very little support for the post quota ambitions of European dairy farmers
- Due to likely liquidity issues on farm, the first half year of 2016 will be a critical period for Irish dairy farmers and their banks as a global market turnaround may take longer than expected due to
  - the ongoing weakness of Chinese imports
  - ongoing tension between Russia and the Western world which makes a quick solution to the current trade ban unlikely
  - most importantly, the strong milk supply growth in Western Europe which remains as yet undented by milk prices below break-even for many farmers
- Long term the outlook for the global dairy market remains very positive for any farmer that is part of a value chain active in a region with favorable production circumstances for milk and with access to the global market. Making the most of these opportunities however, requires a more active role from milk producers in the downstream part of their value chain, for instance via active participation in the board of directors of their co-operatives.

Short term outlook for the global dairy market

If we look at the three main market developments causing the current surplus situation – strong EU milk supply and weak imports by China and Russia – none of these seems capable of turning the market around in the next 4-6 months. Firstly, China will be going through a few more months of absorbing old stocks of powder. These were largely acquired in Q4 2013 and Q1 2014 but further supplemented with local powder during the strong 2015 supply season. Assuming a shelf life of 24 months for imported product and 12 months for local product implies that most of this stock overhang will not be solved before the beginning of Q2 2016.

Secondly, a relaxation of the Russian trade ban is a politically driven process but there seems to be no indication whatsoever of any relaxation within Russia and the Western world.
Thirdly, and most importantly, the ongoing strength of EU milk supply is keeping the global supply and demand balance in surplus mode, despite a weak start of the season in Oceania. Despite prices being at or below break-even for many farmers – especially the ones that have expanded and have relatively high debt levels – EU milk supply remains undented. Apparently, financial buffers from the good years of 2013 and 2014 allow herd numbers and cow productivity to remain high.

November GDT events pushed dairy commodity prices considerably down from the temporary peak reached at the beginning of October. Upside momentum seems largely absent at the time of writing this paper and many assume EU SMP prices to go down to intervention level again. The main condition for this scenario to come true is a relatively positive supply situation – without El Nino - in Oceania during the peak months of November through to January. In that case a lot of product will be competing for a home in Q1 since Northern hemisphere volumes are also seasonally building again. The overall outlook for the final months of 2015 and Q1 2016 is generally flat as prices are already historically low.

From a fundamental point of view, things become more interesting in Q2 as a sustained period of milk prices at the current level is bound to cause significant liquidity problems for European farmers by then. Furthermore, El Nino related impacts on Southern hemisphere product availability and China changing gears will likely also gravitate towards Q2. The level of uncertainty for all of these events to actually materialize is still high, but their impact on the direction of prices goes only one way.

EU milk supply going forward remains key

Of these three main drivers of the current global market unbalance, EU milk supply is the one that probably has the biggest relative impact and therefore also holds the key to a tighter market balance in the course of 2016. One would assume that as 2016 progresses, cash flows will dry up at prices below €0.30 per litre forcing farmers to reduce costs and eventually output. However, after the capacity expansions of the last 24 months farmers may be reluctant to reduce their potential. In the first year after quota liberalisation it will be interesting to see how the interplay between dairy farmers, banks and processors will drive milk production through the current downturn in the global market.

Long term outlook remains positive but milk price differences will increase

Any dairy value chain that is located in a region that is favorable for milk production and where the entire value chain works well together in achieving high value access to the world's emerging dairy markets has a bright future. However, we will increasingly see growing differences in milk prices – even within Europe – depending on a value chain's competitive strength in the global market.

The graph on the next page gives an overview of what it takes to excel as a value chain competing in the international market.

The co-operative model would in principle be a perfect tool to tie all of these aspects together. However, with the liberalisation of the quota regime in the EU comes increasing heterogeneity amongst the member base of co-operatives in terms of big versus small, organic versus conventional, volume driven versus value driven. This sometimes makes it difficult to build a post quota strategy that is a reflection of the joint priorities of the member base.

The members' board, the executive managers and the dairy farmer members should nevertheless realise that, despite potential different interests in details of the co-operative's strategy, all members have a fundamental common interest in the future of the co-operative which is much stronger than any conflict of interest.

Success Leaves Clues - the Skill Set and Mind Set of Successful Entrepreneurs

Sean Gallagher

Sean Gallagher, Entrepreneur & Business Writer with the Sunday Independent

Sean Gallagher is known to many as a successful entrepreneur. A former investor on the popular TV series, Dragons Den, Sean also ran as an Independent Candidate, and was runner up, in the 2011 Irish Presidential Election. Over the years, he has been involved in a variety of sectors including business, politics, youth work, agriculture and disability. Earlier this year he co-founded and is CEO of Clyde Real Estate, a progressive Irish property company, that provides office and commercial space to indigenous Irish and multinational firms. He is also an investor and director of a number of other Irish businesses. As a recognised champion of small businesses he writes part time for the Sunday Independent newspaper where, each week, he profiles Irish entrepreneurs whose stories he hopes will help inform and inspire the next generation of business leaders. He developed a strong interest in youth work and community development while Chair of both his local Foroige and Macra na Feirme clubs, in his native County Cavan. After school he attended Ballyhaise Agriculture college and worked in the agricultural sector for a number of years. He also holds an MBA in Business Management from the University of Ulster.

A recognised champion of small business, Sean will share what he believes are the important characteristics of successful entrepreneurs. He will draw on his own experience of having worked with County Enterprise Boards where he has trained and mentored hundreds of emerging business owners as well as from his time as co-founder and CEO of Ireland's largest home technology company Smarthomes. He will also draw on his experience as an investor on the hugely popular TV series Dragons Den as well as from the 150 interviews he has written on business owners and founders as part of the business profile he writes each week in the Sunday Independent.

Managing Others Successfully

Mark Paine, DairyNZ

Mark Paine, DairyNZ

Mark is the Strategy and Investment Leader for People and Business at DairyNZ. This role addresses issues of recruitment, employment relationships, leadership and career development in the dairy industry. He oversees the strategy and investment in dairy extension, education and training (from apprenticeships through to post graduate scholarships). Mark also covers the development of resources for farm business management. He was formerly the Dairy Australia Principal Research Fellow (Innovation and Change Management) at the University of Melbourne. His research investigated how farmers make decisions with a particular interest in improving information services. This required an understanding of ways to improve the way agricultural researchers and farmers worked together. It also required an appreciation of the learning processes that farmers use when adapting their management practices. Mark has formed strong working partnerships with advisors and rural professionals to conduct his research using a co-development approach. Mark received the APEN Award for Extension Excellence in 2007. His PhD research (Wageningen University, The Netherlands) investigated innovation in the New Zealand dairy industry.

The future of any industry is built by its people. Dairy farming globally is recognising the importance of good employment relationships. This paper uses experience from New Zealand to explain how the dairy industry approached the challenge of achieving good employment practice. It is important to note that the New Zealand experience is a journey that has yet to reach its destination. Some lessons from the journey so far will hopefully relate to the situation in Ireland.

A New Zealand Story

Dairy farming in New Zealand has been a story of continuous expansion in recent decades. Since 1990 the industry has doubled in size with a milking cow population equivalent to the national population (4.8 million). The country now depends on dairy as its primary source of export returns. But with growth comes responsibilities and a heightened public profile. The industry has had to lift its environmental management practices to maintain a licence to operate. Such exceptional growth in cow numbers has also put pressure on businesses to find ways to manage the larger herd size including technical solutions and employing more staff. With an average herd size of 400 cows, businesses typically employ two or three people.

Employment practices have come under increased scrutiny by the New Zealand public and government agencies. Several factors have been responsible. Historically people entered the dairy industry to farm cows and grass, not employ people. We now have an industry with 35,000 people employed, nearly 60% of whom have no post-school qualification. Employers and employees with limited experience of effective employment relationships try to manage the stresses imposed by a seasonal calving system. When volatile milk prices are added to the mix the pressure mounts on people and businesses. Problems arise when corners are cut or when people simply lack the

skills to manage staff effectively. In some cases this might mean a failure to record hours worked or it may result in minimum health and safety standards not being met. When time is not taken to communicate effectively with staff regarding plans for the week or if management fails to positively reinforce work standards then the wheels start to fall off business performance.

DairyNZ commissioned a survey of public perception of the dairy industry in 2014. Two thirds of the public had a favorable impression of dairy farming but the attraction of dairying as a career is not high and has declined over time. Only 45% of respondents saw it as attractive to young people. The perceived cons of dairying as a career outweighed the pros ***(see Table 1)***.

Table 1: The pros and cons of dairy farming careers in New Zealand

Pros	Cons
Good Money (particularly for owners, less so for sharemilkers)	Long hours
Flexible work	Early rising (4am mornings)
Can be your own boss	Very hard work
A good lifestyle	Dirty work
Healthy	Need to be strong
Satisfying	Stressful
Peaceful and quiet	Relentless
Outdoors	High uncertainty (e.g. commodity prices, droughts, etc.)
	Remote/lonely
	Inclement weather
	High suicide rates
	Potential for huge debt
	'A noose around your neck'

These findings stimulated the development of an industry-wide commitment to drive self-improvement in people management practices on dairy farms - the Quality workplaces: dairy action plan. This paper outlines the progress the New Zealand industry is making towards this goal.

What does it mean to manage others successfully?

Put yourself in the shoes of the person you are managing. What would you want to experience? For most people working in dairy farming the answer has several elements to it. We will all give of our best when we feel valued as a member in a team. Many people seek a balance between work and other interests outside the workplace. A number of people also seek to progress their careers. Aside from these motivational elements, a safe work environment and fair remuneration is a bottom line and legislated by governments.

To manage others successfully starts with recruitment. However recruitment is only the beginning of the journey. The employment relationship that forms after recruitment will be a success when the motivational and contractual requirements are satisfied in a way that employees give of their best while deriving fulfilment through their employment.

Aspirations of farmers and industry

A quality workplace builds on firm foundations with practices that comply with the law. DairyNZ and Federated Farmers were clear from the start that achieving a bare minimum in employment standards would compromise the productivity of dairy businesses. At an industry level, public perceptions will only change if good practice become the norm. For these reasons accepting the lowest common denominator is insufficient to attract, develop, reward and retain highly skilled and motivated people.

A development group led jointly by DairyNZ and Federated Farmers drafted a plan targeting a significant cultural change in people management practices on dairy farms. A wider group of organisations were consulted, providing input to the final version of the dairy action plan. This consultation also engendered support for its implementation.

Our aim is for dairy to be able to tell a compelling, positive story about the value of people. Quality work environments on New Zealand's dairy farms are enjoyable, safe and rewarding places to work. These environments ensure talented, motivated people are attracted to the industry, and that they are supported and encouraged to develop their talents and pursue meaningful careers. The challenges to achieving a positive story about how we manage our people are significant. More than 90 percent of dairy farmers in New Zealand feel they are competent at people management, although less than half actively enjoy the task. This creates a dilemma. Farmers who like and feel good about their abilities typically see little need to upskill. Furthermore, farmers who feel competent, but dislike people management, are unlikely to spend additional time focusing on improvement.

The Five Pillars of Good People Management

Five pillars of good people management were identified through the consultation process that involved more than a hundred farmers and over 20 organisations including industry groups and government agencies.

Pillar 1: Balanced and productive work time: Dairy farm businesses will invest in people, and structure their work time to maintain the balance and variety that allows people to perform to their potential.

Pillar 2: Fair remuneration: Dairy farm businesses will meet all legal employment requirements. Using the legal requirements as a foundation, dairy businesses will offer competitive wage and salary rates that attract and retain the talented people needed for a profitable and sustainable industry.

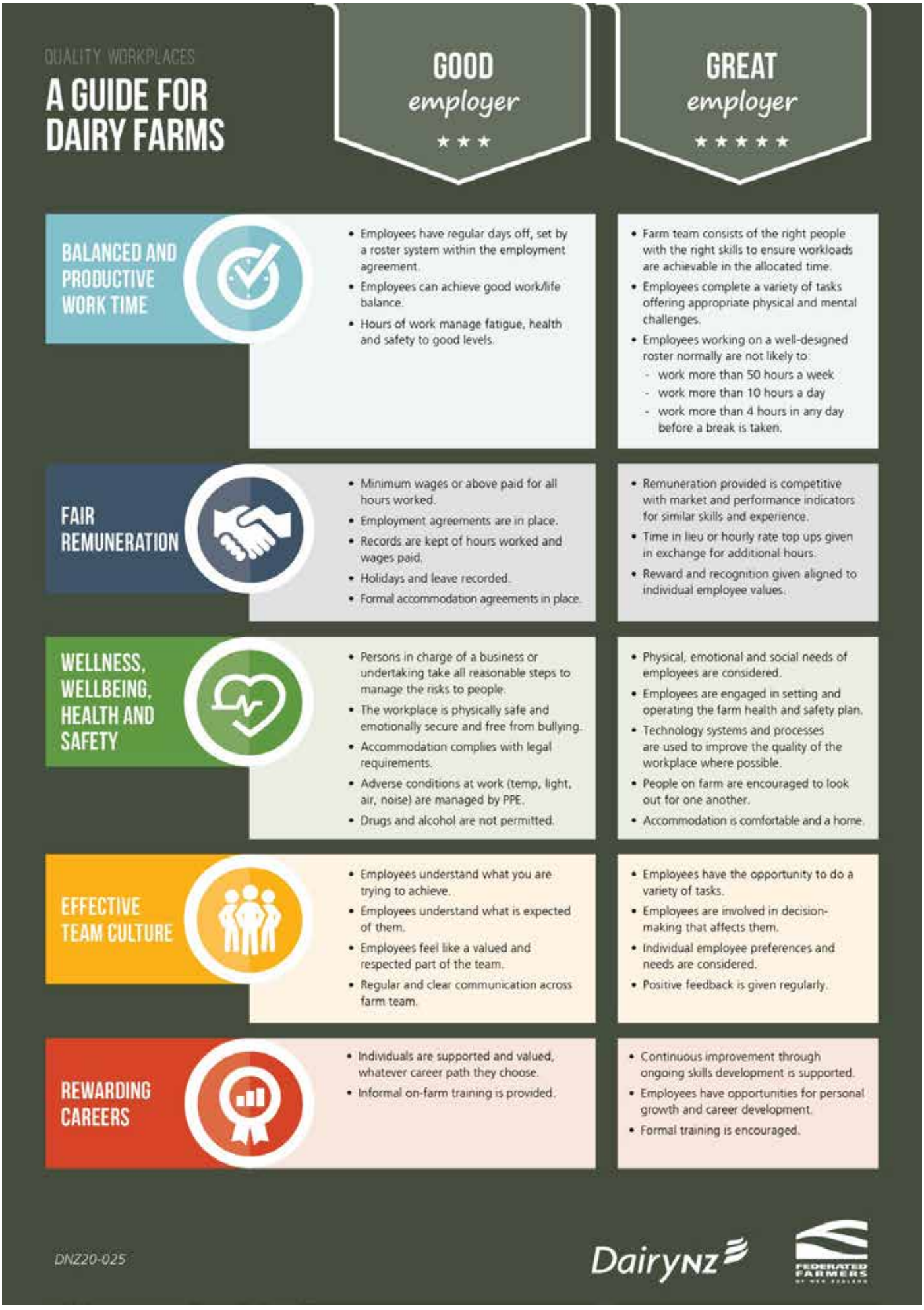
Pillar 3: Wellness, Wellbeing, Health and Safety: The dairy industry will significantly improve its record in health and safety.

Pillar 4: Team Culture: Farm businesses will provide the direction, engagement and support to staff to develop and maintain relationships that enable them to do their best at work each day.

Pillar 5: Careers: Dairy farm businesses will give staff the chance to learn new skills and knowledge and be rewarded by progression within the business or industry.

Taken together the pillars form a framework that underpins a quality work environment. Each pillar embodies standards for good practice and best practice ***(see Figure 1).*** Tools and resources that support farmers to improve performance are now aligned with each pillar.

Figure 1: The Five Pillars in the Workplace Action Plan



What does it mean for the employer?

Employers will have access to an assessment tool which identifies the top priorities for improvement across the five pillars. The tool is designed for self-assessment by both employer and employee. A more rigorous assessment can also be achieved using an independent rural professional who is certified in people management practice.

If recruitment and induction is the issue then online resources support the employers to ensure they get the right person for the job. If the current roster is resulting in stress and fatigue of staff then a Roster Builder is available to redesign work schedules that ensures all tasks are completed on time and to a high standard.

In a similar way resources are available to build health and safety plans, create effective team cultures and grow career pathways for staff.

The economic return from good people management practices is significant. Greer (pers comm) used data from a large multi-farm business and estimated the benefit to be $150/cow. For a typical 500 cow farm with three employees using the services of a specialist people management consultant over a two year period to lift people management from minimal to good practice, would be in the same order of magnitude, providing a farm benefit of $75,000 per farm per year.

These economic gains derive from managers who achieve consistently high performance and therefore more profitable farm systems compared to farms that are staffed by teams that lack direction, commitment and balanced skill sets. Improved people management has also been shown to increase productivity and improve farm factors (reduced lameness, better survival of cows with metabolic problems, reduced somatic cell count and reduced repairs and maintenance costs). Better people management also results in health, wellbeing and social benefits with managers and employees reporting less stress, more job satisfaction, a better lifestyle (including better family time) and more community activity.

What does it mean for the employee?

Employees recognise the seasonal challenges associated with grass based dairy farming. Notwithstanding these demands they can still expect a typical week to not exceed 50 hours of work. Employees complete a variety of tasks and they form part of a team that has the right mix of skills to ensure workloads are achievable.

Remuneration rates are competitive with other industries. Non-cash incentives are also available to reward and motivate staff. This could include further training and opportunities for leadership development.

Health and safety plans anticipate hazards for staff and visitors (e.g., contractors) who are advised of these risks when they work on-farm. Employees take the initiative to identify hazards and they take responsibility for reporting near misses.

Progress to date

Employment in the New Zealand dairy industry still faces a number of challenges. These include:

- Pressure on the share milking system, particularly lower order share milkers when milk prices are low.

- Risks related to the supply of migrant labour.
- Impacts from new health and safety legislation (to be enacted April 2016).

Determining how the industry is progressing across the five pillars of good employment practice is now monitored using a scorecard approach. Data from individual farms and government databases have been combined to determine performance at an industry scale (see Figure 2).

Employment practices in the New Zealand situation scores well in terms of teamwork and support for employee career aspirations. Further work is required in the areas of balanced work time, particularly excessive hours of work and unsociable rostering. Remuneration performance also needs to improve, though this is largely an issue of inadequate time recording practices. Finally, health and safety practices need to improve, particularly with regard to quad bike accidents and injuries from animals.

What does it mean for Irish dairy farming?

The New Zealand dairy industry recognises that the future viability of its businesses will require a move from being good employers to being great employers. It has approached this goal using a partnership approach involving farming organisations and government agencies.

The situation in Ireland is likely to differ from New Zealand given differences in herd size, industry growth rates and levels of capital investment in farm infrastructure. Regardless of these differences the five pillars of employment practice targeted in New Zealand are relevant to any dairy business that employs staff. The framework provided by the pillars focuses the development of guidelines, tools and extension programmes to support dairy businesses. A common framework for change enables government and industry organisations to combine their resources and achieve a cultural change in the workplace. The pillars also provide a useful framework to monitor and report progress.

In future there may be opportunities to exchange tools and resources between Ireland and New Zealand to ensure dairy production has an excellent international reputation for employment and farming practice.

References

Greer, J. (pers comm). The pivotal role of people management in adapting dairy farm systems to external challenges.

Managing Yourself Successfully

Declan Coyle, Andec Communications

Declan Coyle, Andec Consulting

Declan is a director of Andec Consulting and one of Ireland's most internationally experienced Leadership Training & Development consultants. He has delivered specialist programmes on leadership, management, sales and organisational development to clients in Ireland and worldwide. He uses a number of tools, including the 'Red and Green Platform System' he developed, to focus individuals on personal and company goals. His success as a key motivator for business leaders has in recent years been harnessed in the sports arena where he has given regular goal setting and mental strength motivational sessions to a number of GAA teams. Declan is himself a former Ulster Championship medal winner who played senior football with Cavan. He is the author of the Number 1 best-selling book, 'The Green Platform', an innovative 'inner software' methodology that has transformed the morale, productivity and profitability of companies across the globe. Declan is a member of the Irish Institute of Training and Development.

Summary

- The Power of The Green Platform
- Transforming Your Inner Stories, Questions and Beliefs
- Partner Power: Embedding The Process

How did the Green and Red Platform come about?

I grew up on a farm in Dungimmon, a beautiful valley between the wisdom mountain of Loughcrew, the hill of the Holy Healing Woman, and the romantic lake of Lough Sheelin forever linked to the love story of Orwin and Sabina. We had horses, cattle, cows, sheep, pigs, goats, hens, ducks, cats and dogs. In that era of the 50s and the 60s I saw farming change more than it had changed in the past 10 centuries.

It was a time of the four 'Cs.' The constant capacity to anticipate and adapt to continual change. My father was both conservative and revolutionary at the same time. He had the second milking machine in Co Cavan after Lord Farnham. He was a dairy revolutionary. But he loved horses. He raged against the machine. He saw tractors as an affront to proper ploughing. "They'll have to go back to the horses, you'll see. Mark my word," he would say to our neighbour Pat Browne. He was conservative. And you should hear what he thought of "dungy dank cold lump" of silage, compared to a nice wisp of fresh clean hay.

I'd say that our inner software didn't change much over those ten centuries. We still recycled the same old scripts that our parents and grandparents had. Often they were negative and didn't serve us well. Often we got stuck in a cycle of complaining, blaming and bemoaning and we weren't even aware of it most of the time. "He made me very angry." Not at all. It was my choice to be angry, but

nobody ever told us that. “She really annoys me.” Nonsense. I am freely choosing to be annoyed. Again, these were handed-down automatic reactions that we saw as normal. Nobody ever told us that we had a choice.

Over the years I wanted to develop something for people that would be powerful, challenging, deep and at the same time achieve this inner shift enabling them to manage themselves successfully for peak performance. Something that would create change, and would be easy to absorb, understand and implement. Most personal development tools can be very complicated and my challenge in terms of enabling people to achieve peak performance always was to make things extremely simple to understand, implement and embed in a team culture on the farm or in the corporate world. The key to this was to enable people to better manage their own personal lives. We get a computer or a photocopier now and we get working manuals with them. No one ever gave us a personal ‘mind manual’ to help us to manage ourselves successfully.

That’s where I got the idea of the Green and Red Platforms. The colours came from an inspired moment at traffic lights one morning. The subliminal idea of Red for ‘Stop,” and Green for ‘Go.’ Green had the subliminal idea of spring, new growth, fresh starts and new beginnings contained in it. It also seemed to contain that sense of our ancient Celtic spirituality that was always so full of wisdom, insight and good humour. The joy of living that we commonly call here in Ireland, “the craic.”

The Green Platform in an inner place where we consciously choose all that is positive, uplifting, creative, joyful, inspiring, compassionate and generous. It’s where you radiate positive energy and choose actions that bring joy to others. It’s where you live your life with passion, excellence and fun. Where you make things happen rather than making excuses. The Green Platform is the empowered platform and has the ten most powerful words in the English language, no word more than two letters: ‘If it is to be, it’s up to me.’ People on The Green Platform are energised but also calm, enthusiastic, confident and optimistic.

People on The Green Platform are ‘Energy Transformers.’ You meet them and they contribute to your energy and increase your inner joy. The pronoun on the Green Platform is ‘I.’ I am responsible. People on the Green Platform have ‘response-ability,’ the ability to choose their response at any given time.

The Red Platform is the home of the victims, the whingeing, whining, moaning, ‘poor me' people who are constantly blaming others. They are the ‘Energy Vampires’ who drain you in every encounter. They suck the energy out of you like a vacuum cleaner. They sap your energy. They are the robbers and thieves of your inner joy, peace and happiness.

Underneath the Red Platform is a septic tank of sabotage, fear and limiting beliefs. The Red Platform is a place of complaining, blaming and finger pointing - it’s your fault, or their fault - but no matter how much I blame you it won’t change me. The pronoun on the Red Platform is ‘you.’ I blame you. You are responsible for all my problems. It’s all your fault.

Underneath the Green Platform is the field of all possibilities.

The key to stepping on to either one of the platforms is totally in your hands. It’s your power to choose. You have in your hands the last and the greatest of the human freedoms – to choose your response in any given set of circumstances.

How does it work?

I was against negative thinking years ago and I didn't know why, because as Irish people we saw ourselves as negative, but real, and viewed Americans as positive, but maybe not so real.

I then realised that we have to be emotionally honest, and that struck at the core of what my problem was. For example, if I suffer a terrible tragedy or disappointment, then I can't turn around and just say "be positive, have a positive mental attitude and the problem will disappear." That's not realistic or honest. There is an important step in-between.

I discovered this 'missing step' when I was doing my postgraduate studies in Ottawa while listening to a visiting professor, Viktor Frankl. Frankl was tortured in Auschwitz and talked about his horrific experiences in the death camps. But, instead of being destroyed by this, inside he chose peace, joy and happiness. He learned that he had the freedom to choose his response in any situation. Even in the torture chambers of Auschwitz. "They could break my body," he said, "but they couldn't touch my spirit."
This was a defining moment for me – a moment when I realised the great power we have in any situation, no matter how challenging.

Between stimulus and response there is a space, I call it, 'The White Space.'

In that space we have the power to be aware and to proactively consciously choose the energy with which we want to respond – kindness, compassion or empathy - or to automatically react negatively to negative things, with a guaranteed negative outcome. If we consciously choose The Green Platform, then that awareness and choice of response is what saves us from being just another bunch of predictable reflexes constantly being triggered by people and events into predictable outcomes. We can choose our response rather than being mere reactors.

What I had been grappling with for years suddenly came together - you have a human experience, an emotional experience, you honour it, you feel it fully. If it's tragedy you cry the tears. If it's loneliness your turn on the tap. There can be no healing without a real and genuine feeling. Emotional honesty. Then in that 'White Space' is the place where you have the freedom to choose your response – and that even from a negative experience, we can choose to take positive actions, which will in turn deliver more positive outcomes. This then is what will transform the quality of our lives. When bad things happen to good people, good people respond differently. But it's all based on a foundation of absolute emotional honesty. You cannot just pour positive Green Platform paint over human suffering.

On the Green Platform things happen, and we bring acceptance to what happens. 'It is as it is.' This is followed by positive action now, but on the Red Platform that 'acceptance' can easily turn to apathy or indifference.

We cannot argue with reality or we will lose, but only 100% of the time. It is as it is. The formula on the Green Platform is: 'Acceptance + PAN.' Acceptance – 'It is as it is' – plus **P**ositive **A**ction **N**ow. Of the 100 things, what one thing can I do now to make matters better? Then just do it.

To manage successfully look for **PAR's** as much as possible: **P**ositive **A**ffirming **R**emarks in all situations. In other words catch people doing things right and mention it to them. That's taking a Green Platform approach. Shining a light on what is right. Almost by default we catch people doing

things wrong and ignore all that they are doing right. Catch yourself and others doing things right or just even better.

The greatest poison in a family or team or organisation is the pervasive presence of NBRs. **N**egative **B**elittling **R**emarks. The put-downs. By the time the average child is 12 they have received 100,000 NBRs. Then we wonder why 98% of children at the age of 14 have a negative self-image.

Is it about the stories we tell ourselves?

Yes, it's all about interpretations, meanings or stories that we tell ourselves. If you go on to any farm you will find a lot of Red Platform stories. For example, an event has no meaning, a fact has no meaning and a situation has no meaning unless I make up an interpretation or meaning or a story about it.

On the Red Platform, the response is dis-empowering stories where the interpretation of events becomes poison to the farmer, for example, "This is a disaster, we can't succeed," etc.
On the Green Platform, meanings, interpretations and stories become energising and powerful. The interpretation for Red Platform disaster is, "This is a great opportunity, let's see what we can do here to succeed."

On the Red Platform people feel bad because of the negative story or interpretation they are telling themselves, whereas on the Green Platform their empowering stories help them to feel good and increase their energy to take positive action. Feelings follow meanings. So in life we do two things over and over. We think and we feel. We either think and feel about what we want to create and attract into our lives on the positive inner Green Platform, or we think and feel about what we don't want to create and attract into our lives on the inner negative Red Platform.

It is always a choice. Choice is power. Decisions shape destiny. The choices you make make you. And where attention goes energy flows.

My question is this: "Why should we be making up negative stories on the Red Platform like - 'Woe is me' - that make us feel bad, when we can just as easily make up positive stories on the Green Platform like - 'I can handle it' - that make us feel good?"

What about the questions we ask ourselves?

Then there are Green Platform and Red Platform questions. Green Platform PowerQuestions and Red Platform Poison Questions.

The questions in the farms around the world are also often full of Red Platform PoisonQuestions such as:

"Why me? What else will go wrong? Why does this always have to happen to me?"

It's 100% certain when you ask a PoisonQuestion question, you'll get a poison answer.

"Why you?"

"Because you're a slob. Because you lacked early life love. Because your mother loved your sister more than you."

Instead ask, "How can I?" "What can I?" Green Platform PowerQuestions like:

"How can I turn this around and enjoy the process? How can we double productivity and halve the time? What's the most important thing to focus on today and where can we get the biggest breakthroughs in the coming months? How can I be the best, the most efficient and the most effective that I can be on this farm?"

If I am at a mart and I don't get a sale for a bullock, instead of asking a Red Platform PoisonQuestion such as, "Why me, what else can go wrong?" the farmer is more likely to achieve a better outcome by asking a Green Platform PowerQuestion like, "What can I?" such as, "What can I learn from this and do differently next time?"

Likewise, if you don't get a good price for your milk, instead of asking, "Why am I being left behind?" ask instead, "How can I add value to the farm?"
Even with a child not doing well at school, instead of asking the PoisonQuestion, "Why can't the teachers do better?" ask a PowerQuestion instead like, "How can I help my child with his or her homework?" PowerQuestions are powerful because they imply action. The Red Platform PoisonQuestions promote inaction, apathy and indifference because somebody else have to change first. The situation has to change. But not me. Never me. "It's all their fault."

How about beliefs?

Then we have beliefs. The Red Platform person with the PoisonBelief says, "I can't do it" versus the Green Platform PowerBelief person who says, "We can do it, we'll find a way." Whether you think you can or think you can't, either way you're right.

Is it not all a bit tree-huggy and touchy-feely?

My response to this is to look at the huge cost of negative behaviour and attitudes in the workplace. Research has shown the cost of Red Platform negative attitudes and behaviours to the US economy in just one year is half a trillion dollars (one thousand dollar bills on your hand 38 miles high) in lost productivity – and that's without taking into account absences, illness, and other problems that result when workers are disengaged from their work and their companies. So the cost of Red Platform negative thinking is enormous. (HBR, May 2014, p. 62)

Whereas on the Green Platform, another Harvard study showed that when people are positive in the present every single business outcome improves. Specifically across a range of trials, productivity went up 31% and sales went up 37%. The only thing 'touch-feely' about that is the high morale of the people, higher productivity and increased profits. That, in a nutshell is the power of The Green Platform.

How do you implement the Green Platform?

The methodology I've used for the past 20 years with the GPPP - Green Platform Partnership Programme - is an approach now recommended by the American Association of Training and Development.

An ASTD survey found when people worked with an accountability partner – goal achievements went from 40% to 95%. At a time when the single biggest challenge of CEOs is not goal setting but goal implementation and consistency in that implementation, this is a massive breakthrough. A 55% increase in implementation.

The Green Platform Partnership Programme ensures that long after our training is over the new practices are embedded in the farm workers creating a lasting cultural change. We normally get companies to implement a 15 minute meeting every Friday, either face-to-face or on the phone where a Green Platform Partner will positively and supportively hold you accountable asking the following questions:

1. Were you on the Green Platform this week? Did you stay on it and did you help anyone else to come on to it?
2. Did you deliver on your 20% of your tasks that deliver 80% of your results?
3. Were you working from your strengths and using them for the good of farm this week?
4. How are your three fiercely important goals (FIGS) going?
5. Did you write down every evening your five most important tasks for the next day and do these first each day?

The single most radical, revolutionary act you can commit in today's world is to dare to be a joyful person. Dare to give children the idea that some adults are actually enjoying themselves. Dare to give up liking your bad days. Dare to be the joyful, magical, positive person you were born to be.

If an egg is broken from the outside, life ends. If an egg is broken from the inside, life begins. All real and lasting change starts on the inside and works its way out. It's all back to the inner world of people – when people feel good about themselves and manage themselves successfully, they achieve incredible results. The Green Platform is an inner manual for the mind that is simply life-changing. We didn't have one growing up on the farm in Dungimmon all those years ago. Now we do. It's called The Green Platform and it does exactly "what it says on the tin."

Breakout Sessions

Tuesday, 8th December

Growing More Grass - *Getting to the Root of the Problem!*

John Maher, Ger Courtney, David Wall, Teagasc

Summary

- Only 10% of dairy farms have optimal soil pH, P and K status
- Low soil fertility will reduce both total and seasonal grass production
- Soil test results for the whole farm are essential
- 65% of soils are deficient in lime; this is the most limiting factor in terms of soil fertility
- Applying lime to soils to correct soil pH will result in the following:-
  - Increased grass production
  - Increased release of soil Nitrogen by up to 80 kg N/Ha/yr (65 units N/ac/yr)
  - Increased availability of soil P and K
- The return in grass production from correcting soil fertility is high

Introduction

Soil fertility levels have declined on dairy farms. The soil samples taken from dairy farms and analysed by Teagasc recently show that only 10% had optimal soil fertility in terms of pH, P and K (i.e. Index 3 for P and K and pH >6.2). With up to 90% of soils currently deficient in at least one of these critical elements, poor soil fertility poses a significant threat to achieving both increased seasonal and total grass DM production. This will result in:

- Less grass grown on farm
- Increased costs in the form of extra feed
- Less grass eaten per cow
- A shorter grazing season
- Lower response to Nitrogen

Therefore, the first step to grow more grass and make the best use of your grassland resources, is to look below the surface; to do this start with a soil test and create a fertiliser plan for your farm. It is important to remember that the primary function of soil testing should be to inform the farmer of the soil fertility status. More recently, soil testing has become more associated with compliance with regulation than with good farming practice.

Grass requires a continuous and balanced nutrient supply from the soil to achieve its production potential. Many dairy farms are now capable of growing in excess of 14 tons DM/Ha annually. This level of grass production requires large quantities of nutrients such as Nitrogen (N), Phosphorous (P), Potassium (K) and Sulphur (S).

Lime requirement

The starting point when building soil fertility is to apply lime according to the soil test recommendations. About 65% of Irish soils are deficient in lime. The majority of agricultural soils in Ireland are naturally acidic (low soil pH). Therefore it is critical that lime is applied to restore more neutral pH condition which is more favourable for nutrient release and grass production. Lime is a soil conditioner and corrects soil acidity by neutralising the acids present and allowing the micro-organisms and earthworms to thrive and breakdown plant residues, manures and

organic matter. This helps release stored soil nutrients such as N, P, K and S. Recent research from Teagasc, Johnstown Castle illustrates that 5 ton/ha (2t/ac) of lime applied to a soil with low pH (5.3) increased grass production by approximately 1.5 tonne DM/Ha in the following two year period. This highlights the importance of lime in relation to the availability of soil P reserves. Applying lime to low pH soils will unlock P from the soil and increase soil index P by at least one index. In addition, ryegrass swards will persist for longer after reseeding where soil pH has been maintained close to target levels, through regular lime application.

Apply lime based on the soil test report to achieve the target soil pH of 6.3 for grassland. Split lime applications when required rates exceed 7.5 tonne/ha (3 t/ac) and reduce lime application rates on high molybdenum (Mo) soils so that soil pH does not exceed 6.2. This will help reduce the Mo uptake into grass which can induce copper deficiency in ruminant animals. Ground limestone is the most cost effective source of lime and can be applied throughout the year when the opportunity arises. Maintaining soil pH at the target level will increase the release of nutrients from the soil and up to 80kg/ha additional N release has been shown over the growing season. Lime is the foundation of soil fertility and is a primary step to take when correcting soil fertility.

Phosphorus (P) and Potassium (K) Status

The nutrient application advice for P and K for grassland on dairy farms is outlined in Table 1 and 2. The guidelines given in the tables for P and K applications include P and K from both chemical fertiliser and slurry sources. In addition, the P application rates should also be adjusted to account for P coming into the farm in concentrate feeds. The tables highlight the high maintenance requirement for nutrients at high stocking rates.

Table 1. Simplified P requirements (kg/ha) of grazed and cut swards for dairy farms *(These total P requirements should be adjusted for concentrate feeds or manures applied)*

Soil P Index	Grazed Swards				Silage Swards	
	Farm Stocking Rate (LU/Ha)				Cut Once	Cut Twice
	<1.5	1.5 - 2.0	2.0 - 2.5	>2.5		
1	30	34	39	43	+20	+30
2	20	24	29	33	+20	+30
3	10	14	19	23	+20	+30
4	0	0	0	0	0	0

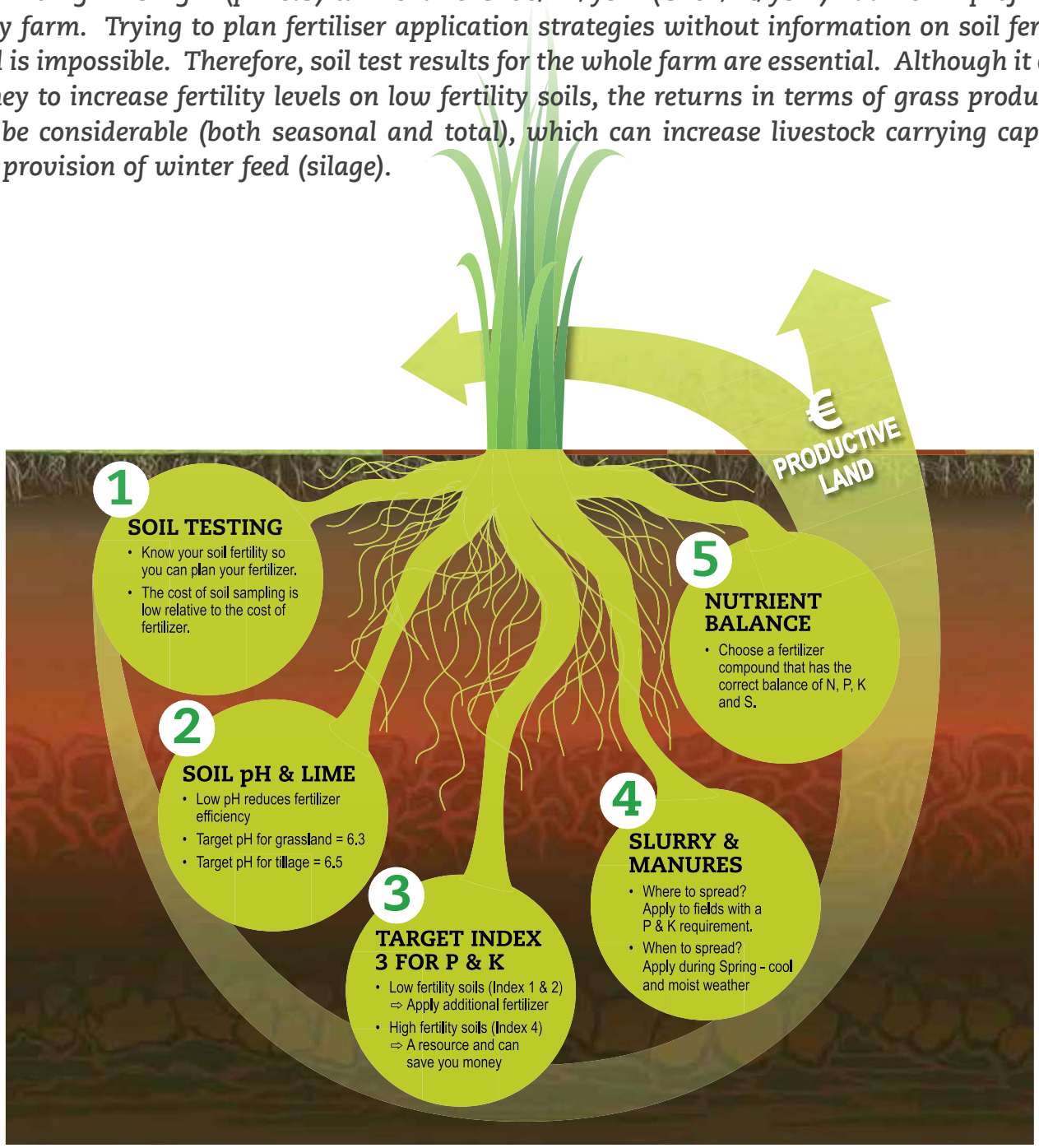
Table 2. Simplified K requirements (kg/ha) of grazed and cut swards for dairy farms *(These total K requirements should be adjusted for manures applied)*

Soil K Index	Grazed Swards				Silage Swards	
	Farm Stocking Rate (LU/Ha)				Cut Once	Cut Twice
	<1.5	1.5 - 2.0	2.0 - 2.5	>2.5		
1	85	90	95	100	+120	+155
2	55	60	65	70	+120	+155
3	25	30	35	40	+120	+155
4	0	0	0	0	0	0

Upgrading soils with poor fertility status is essential to prevent an overall reduction in soil fertility below that required to maintain productive grass swards. Increasing soil fertility of Index 1 and 2 soils up to Index 3 is vital to maintain high DM production across the farm. Recent research has shown that soils with P Index 3 will grow approximately 1.5 tonne DM/Ha per year more grass than soils with P index 1. Most of the DM yield response in these experiments took place in spring and early summer. The persistency of ryegrass is much greater when soil P index is right. Some older research has shown similar gains in grass production (1-1.5 tonne DM/ha) when with soils a K Index of 3 are compared with soils that are Index 1 for K.

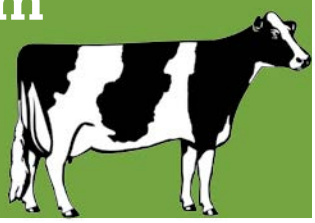
The fertilizer value of slurry (7% DM) translates to approximately five and thirty units of P and K per 1,000 gallons (very close to one bag of 0:7:30) respectively. Slurry alone will not be adequate to maintain P and K in silage paddocks and hence these two nutrients must be applied in the form of chemical fertiliser also.

Correcting soil fertility by moving from Index 1 (poor index soils) to 3 (target index soils) in P, K and having lime right (pH 6.3) will lead to €400/ha/year (€161/ac/year) additional profit on a dairy farm. Trying to plan fertiliser application strategies without information on soil fertility level is impossible. Therefore, soil test results for the whole farm are essential. Although it costs money to increase fertility levels on low fertility soils, the returns in terms of grass production can be considerable (both seasonal and total), which can increase livestock carrying capacity and provision of winter feed (silage).



How to breed the right cow for your farm

Brian Hilliard, Donagh Berry, George Ramsbottom, Teagasc & Andrew Cromie, ICBF



Introduction

The goal of the EBI Is to identify animals whose progeny will be most profitable under future Irish production systems. Analysis of commercial farm data indicated that each €1 increase in herd EBI results in a €2 increase in profit per cow per lactation (Ramsbottom et al., 2012). The incorporation of Genomic Selection into the national breeding programme since 2009 has increased the theoretical rate of increase in EBI to €38 per cow per year. A breeding profit index such as the EBI should include all heritable traits that will affect profit in the future:

- Product quality and feed efficiency are currently not explicitly included in the EBI;
- Animal health and disease resistance is poorly represented in the EBI;
- Genetic variation is known to exist for all these traits, and data are now being routinely generated for these traits.

The role of crossbreeding

The two primary reasons to crossbreed are: 1) introduce favourable gene variants from another breed selected more strongly for traits of interest, and 2) to capitalise on what is known as heterosis or hybrid vigour. The first point relates to additive genetic differences between breeds (e.g., breed differences in milk yield, milk composition, size, beef merit, fertility, mastitis resistance, intake capacity and feed efficiency. According to Evans and Harris in Buckley et al. (2014), economic heterosis can contribute in excess of €100 and NZ$96 per lactation in Ireland and New Zealand respectively,

Emerging trends on Irish dairy farms

Analysis of the national milk production, fertility and herd genetic data for 2010 and estimates for 2015 is presented in the following table.

Table 1. Milk Production fertility and herd genetic data for 2010 and 2015

	Av Herd Size	Av Herd EBI	Milk solids sold (kg/cow)	Calving interval (days)	6-weeks calving rate (%)
2010	55	€72	340	402	52
2015 est.	75	€133	380	392	57

Clearly genetic and fertility progress has been substantial. Milk production was constrained by access to quota. Now this restriction has been removed. All of the metrics detailed above are hugely variable.

Breeding the right cow

The national herd is very diverse in terms of scale. Approximately 75%, 20% and 5% of herds will be less than 100 cows, 100-200 cows and greater than 200 cows by 2020. Are the sires that dairy

farmers use to breed the right cow for their farm different for farmers operating at larger scale to those with smaller herds?

The national herd is also diverse in terms of milk production and fertility. Does the emphasis on the breeding decisions change for such herds in terms of the sub-indexes that they focus on or should they merely choose bulls from the Active Bull list irrespective of the strain of cows that they have?

What then is the best approach for farmers with primarily crossbred cows – should they continue to use crossbred bulls or revert to high EBI Holstein-Friesian sires?

Will the traits we breed our cows for change in the future? For example many health traits in dairy cattle are heritable (Berry et al., 2011). Management traits such as milking temperament and milking speed become increasingly important with larger herds and more cows milked per person. Which traits are likely to become more important in the years ahead and which should farmers start to include in their breeding decisions?

References

Berry, D.P., Bermingham, M.L., Good, M. and More, S.J. 2011. Genetics of animal health and disease in cattle. Irish Veterinary Journal 64, no. 1: 5.

Buckley, F., N. Lopez-Villalobos, and Heins, B.J. 2014. Crossbreeding: implications for dairy cow fertility and survival. Animal 8, no. s1: 122-133.

Ramsbottom, G., Cromie, A. R., Horan, B., and Berry, D. P. 2012. Relationship between dairy cow genetic merit and profit on commercial spring calving dairy farms. Animal, 6(07): 1031-1039.

Options to manage labour during the peak spring calving period

David Gleeson, Teagasc

Summary

In the Irish grass-based milk production system, the majority of cows calve during an 8-week period. This can create a severe demand on limited labour resources. Farm labour studies undertaken in Ireland have highlighted that calving/calf care and milking have the highest labour demands during this period. There are a number of management strategies applied by some farmers to reduce labour demand such as manipulation of calving time to increase day time calving's, once a day calf milk feeding and early turnout of calves and reducing milking frequency for a period postpartum. The implications of using these particular steps are discussed in this document.

Calving time- day versus night

A recent Irish farm labour survey indicated that approximately 50% of dairy farmers with large herds (> 70 cows) practiced evening feeding of silage to reduce the number of night calvings. Rumen contractions associated with feeding may influence calving time. A study was undertaken to establish the effect of feeding regimen on time of calving for spring-calving dairy cows housed indoors on a silage diet. Two grass silage-feeding regimens were imposed on housed spring-calving cows on three research farms. Cows on treatment 1 had access to the silage between 2030 hours and 1030 hours. Cows on treatment 2 had continuous access to silage over a 24-hour period. Cows remained on their respective feeding regimens until calving (mean days on treatment, 45). Daytime and night-time calvings were defined as calvings that occurred from 0630 to 0029 and from 0030 to 0629, respectively. Restricting silage feeding time resulted in 9% less night calvings compared with cows with full access to silage. Fifteen % of cows still calved by night and 85% by day when silage feeding time was restricted and 24% calved by night and 76% by day when cows had continuous access to silage. Alterations to daily management routines to allow dry cows access to silage during the night (and not during the day) would appear to be worthwhile in limiting the number of calvings by night.

Calf feeding system and labour requirement

A study was undertaken on 57 commercial herds to quantify the overall labour requirement for calf care and how it is influenced by enterprise scale and facilities, together with an evaluation of specific calf-feeding systems with respect to labour requirement. The total average time consumed by calf care (includes colostrum stage) per farm increased with herd size and the average time consumed per calf was highest in the small herd (<50 cows) group (2.1 min/day) and lowest in large herds (1.70 min/day). The proportion of farms bucket feeding was lower and the proportion feeding calves ad libitum (0.50) and using cold milk (0.23) was higher with the large herd group (>80 cows) compared to the small herd group. Total calf care time (8 days to 8 weeks) was 23 sec per calf for herds that fed calves milk once daily compared to herds that fed calves twice daily (36 sec).The labour input per calf for the cleaning of calf pens was greater with automatic feeding systems compared to the other feeding systems. Farms not using automatic feeding tended to put calves on once a day milk feeding earlier and put calves outdoors earlier and this may account for the lower calf bedding times with these systems. Overall 36% savings in total calf care time could be achieved if calves were fed milk once daily.

Once a day milk feeding and early turnout

Calf feeding methods can influence labour input and calf performance. At Moorepark, female calves (n = 56) were assigned to 3 cold milk (5-100C) feeding treatments. Whole milk was fed to calves once daily (OD) or twice daily (TD) and calves remained indoors for the first 80 days, and a third group were fed milk once daily and were put outdoors at day 38 (ODO). There were no differences in liveweight (LW) or average daily gain between calves fed milk twice a day or once day at day 80 or 410. Calf LW at day 80 was 86, 89 and 85 kg and at day 410 was 304, 309 and 316 kg for OD, TD and ODO, respectively. Turning calves outdoors at 38 days of age while being fed milk once daily had an initial negative effect on calf performance and this was probably due to reduced concentrate intake and the inclement weather conditions at that time but did not affect subsequent live-weight performance. Similar calf performances in subsequent trials were observed when calves were fed milk replacer as opposed to whole milk. To comply with EU regulations with regard to feeding calves twice daily, calves need to be consuming an alternative feed before introducing once daily milk feeding from 4 weeks of age.

Milking cows once daily in early lactation to reduce labour

Once daily milking throughout lactation has been shown to reduce milk production and have positive cow health benefits such as increased BCS. To minimise labour demand during the postpartum period, milking once daily for a couple of weeks is implemented on some farms. The majority of previous international work in relation to reduced milking frequency in early lactation has been conducted on high-yielding cows fed TMR. The closest published work on the effect of reducing milking frequency to an Irish milk production system is that undertaken by C.V. Phyne et al (2014) in New Zealand using Holstein-Friesian cows. Cows were at pasture and fed concentrates and assigned to either twice daily milking (2x), once daily milking for 3 weeks (1x, 3wks) or 6 weeks (1x, 6wks) immediately postpartum. After the 3 and 6 week periods respectively the cows were milked twice daily for the remainder of the lactation. The milk production performance during the 3 and 6 week periods and over the subsequent lactation were measured, other health indicators such as BCS and fertility performance were also recorded. Over the first six weeks of lactation the mean milk production was 21.7 kg, 19.3kg and 23.7kg for cows milked 1x for 3wks, 1x for 6wks and 2x for 6 weeks, respectively. This represented milk yield losses of 8 and 19% for cows milked once daily for 3 weeks and 6 weeks, respectively, compared to cows milked twice daily. Once daily milking had a negative effect on fat % and a positive effect on protein %. Somatic cell count did not differ between treatments during this 6 week period or over the subsequent lactation. The mean SCC was 66,000, 79,000 and 62,000 cells/ml for the 3wks, 1x, 6wks and 2x, 6 weeks treatment, respectively. Once daily milking regardless of the duration term resulted in a 6% reduction in milk volume, a 7% reduction in protein yield and 10% reduction in fat yield over the complete lactation. In conclusion, while once daily milking for a period in early lactation will have positive labour saving benefits it will result in reduced milk production during the altered period and over the subsequent lactation.

Managing volatility in your business

Moira Creedon, Artemis Consulting
& Richie Norton Graine, Co. Kilkenny

Introduction

Planning ahead to cope with change is the key to success in a volatile market.

Travelling through home ground on a well-practiced route is easy without navigational help. In an unknown land to a new destination, a Satnav is crucial to plot your course and keep you on track. Otherwise you waste time and petrol, get seriously lost and possibly never reach your destination.

Running a farm in the 21st century can be like driving a car from Cairo to Tehran. There is tough terrain in front, you need to plan the route carefully, keep an eye on the risks ahead at all times. You need to manage the risks you can, and stay agile enough to survive those you can't. You wouldn't do it without at least a map.

You need to check your route constantly and change course quickly when required.

As the Irish Dairy industry faces a period of growth and inevitable volatility, what does this mean on a practical level for your farm financial management?

What is Financial Management?

To understand financial management, put yourself in a car and plan a journey to an unfamiliar cross border destination under tough conditions – foul weather and potential danger. How would you equip the car?

- ### Fuel in the car: Cashflow management

  In farm management this means making sure you have enough cash – not just today, but next week, next spring and through any troughs in your seasonal cycle. Cashflow management is making sure you don't run out of petrol, looking well ahead all the time to see whether and when you may run out of cash and where the next petrol station (lender or funder) can be found to fund any cash deficit periods.

  Looking for an open petrol station late at night with the red light flashing is not a great idea. Likewise seeking funding at the last minute may not work. Plan well ahead to raise funding, and thereby secure the best deal. This is increasingly important with bank lending harder to secure, and banks more risk averse.

  Cashflow management also means minding that money. When you have raised the cash keep the petrol tank secure. Make sure that you are not wasting money.

  Chasing payments promptly from credit customers and making timely payments to suppliers to maintain good relationships and reputation are day-to-day elements of cash management.

- **Satnav/GPS: Target setting and sisk aware planning and reporting**
  We grab a Satnav going on holiday to a new place. Banging in our destination, it scans options and advises us on the best route – depending on our criteria.

  The equivalent in your farm is setting a clear financial target and a plan to reach that target. Do you want to grow the farm? Improve efficiency? Economy of scale? Generate higher income for your family? Get the farm to a more sustainable viability so it's in better shape to pass on to the next generation? For any of the above a clear financial plan to deliver that goal is a necessity,

  Just as the Satnav then monitors where you are and guides you to stay on track, the plan is useless unless you set up mechanisms to monitor whether or not you are delivering on your plan, and make proactive decisions to correct slippage and stay on track.

  Just as the Satnav scans ahead for traffic jams, speed cameras and roadworks, you should be monitoring the risks to delivering the plan and asking do you need to change direction. The plan is a tool, but never set in stone. If things change you need stay agile and reset your plan.

- **Spare wheel and a blanket: risk management**
  Make sure that your debt is under control and that you don't become a mini version of Greece. Commodity price and foreign exchange risks are a major challenge for modern farming with global volatility increasing - these are likely to be more of a challenge in the future.

- **Passport, driver's licence and insurance: compliance reporting**
  These are legally necessary documents you have to produce. Compliance is the general heading for all the financial and related reporting that has to be done as a legal requirement – these are the annual returns you have to make, an important housekeeping necessity

- **Rev counter: commercial decision making**
  A dial that many of us ignore too often when we drive, probably to our cost, the Rev Counter guides the driver to make decisions that improve efficiency of fuel and engine use. The equivalent in your farm is making good commercial decisions to improve efficiency and deliver real financial uplift. Are you investing your capital in the right projects? Are you making the best possible use of your resources?

Volatility - A Pig Farmer's Perspective

Pig farmers have always dealt with the fluctuations of the open market for pigmeat. The supply and demand for pigmeat at an international level has a huge effect on the price received by Irish pig farmers as we export more than half of our pigmeat production. We are very conscious of price volatility in relation to managing our business.

"Turn-over is vanity, profit is sanity and cash is king." Ensuring adequate cash –flow is critical particularly when margins are tight. We engage with the bank personnel on an on-going basis keeping them informed of how our business is performing from both a production and financial perspective. While the cash flow will not reflect our true production costs, for example items such as building depreciation are excluded, it is important when planning to ensure that all payments

are being met. It is critical to develop a reserve fund when margins are good to ease the pressure in difficult times.

We need to be very conscious of our production costs on an on-going basis. We monitor our performance and production costs on a three month (13 week or quarter of a year) basis with the Teagasc e Profit Monitor. This system allows us keep costs as low as possible and also allows us compare our production costs with the "average", the Top 25% and Top 10% of pig herds in the country.

Measuring performance at all stages of production is critical to ensuring decisions are made with full knowledge of what is actually happening on the farm. We weigh our pigs at the end of each production stage on our farm to ensure we have accurate data to use in decision making. We are careful to produce the pigmeat that the market wants and we meet regularly with the processing plants managers.

When problems occur at a financial or performance level we can assess the extent of the issue, team troubleshoot with our Teagasc advisor, Veterinary advisor and nutritionist and then forecast and monitor the financial implications on the cash-flow.

Conclusion

You would not head on a journey to a new place without carefully equipping the car. What about your farm?

Financial management is the combination of data, cash, procedures and systems that gets you to your personal and family goals as quickly as possible without taking too much risk. The 5 key elements outlined above all rest on a bedrock of good quality record keeping (historic book keeping) and planning to drive decision making.

Parasites in the Dairy Herd

Riona Sayers, Teagasc; John Gilmore, FarmLab Diagnostics & John Donworth, Teagasc

Summary

- Ensure that animals with respiratory disease are thoroughly investigated for lungworm. It is not always IBR!
- Data suggests that control of liver fluke is improving on dairy farms but vigilance is still required on all farms to prevent losses.
- Use appropriate doses correctly – not doing so will exacerbate clinical issues and increase the likelihood of anthelmintic resistance.

Introduction

Parasitic infections in dairy animals represent a wide-ranging and complex topic. Differences in parasite lifecycles, preventative measures, and control programmes cause much confusion, and often lead to a number of misconceptions and application of inappropriate control measures. The aim of today's workshop is to clearly outline the lifecycles of common parasites which impact on dairy herds in Ireland and to highlight the logic behind the design of appropriate control programmes.

The parasites of most importance to dairy herds in Ireland are listed in Table 1 along with the common names for these parasites.

Table 1: Parasites of relevance to Irish dairy herds

Parasite	Common name	Age of animal at risk
Cryptosporidium parvum	Crypto	First week of life
Eimeria species	Coccidiosis	3 to 6 weeks of age
Ostertagia ostertagi	Gut/Roundworm	All animals at pasture (highest risk in Summer/Autumn)
Dictyocaulus viviparus	Lungworm	All animals at pasture (highest risk in Autumn)
Fasciola hepatica	Liver fluke	All animals at pasture (highest risk in Autumn/Winter)
Paramphistome species	Rumen/Stomach fluke	All animals at pasture

C. parvum and Eimeria species

Crypto and coccidiosis are protozoan parasites which cause disease in young stock most commonly. Calves from birth to 6 weeks are most at risk from these parasites. Control of both depends on accurate diagnosis of the condition using faecal samples (on-farm test kits available) and dosing using 'Halocur' (crypto) or 'Bovicox' or 'Vecoxan' (coccidia). Dosing should continue in subsequent years as a preventative measure to avoid further outbreaks in the calf cohort. It should be noted that these infections are painful for the calf as the intestinal wall is being damaged by the parasite. Prevention is key therefore in producing healthy and productive calves.

O. ostertagi

Gutworm infect all animals at pastures but the clinical condition has the greatest impact on young stock in the first two years of life. The majority of dairy farmers implement comprehensive dosing regimens in weanlings at pasture but few maintain a comprehensive dosing programme into adulthood. It has been shown by both international and Irish research that high gutworm burdens can lead to a reduction in milk yield across a herd, highlighting a benefit in dosing adult dairy cattle. Appropriate dosing programmes are outlined in the following Animal Health Ireland leaflets available at www.animalhealthireland.ie.

- Parasite control at grazing
- Parasite control at housing
- A guide to parasite control at turn-out

D. viviparus

Lungworm infections are undergoing somewhat of a re-emergence in dairy herds with reports of outbreaks in adult herds more common in recent years. In 2009, bulk milk surveillance recorded almost a quarter of over 300 herds tested as positive for exposure to lungworm. The advent of ivermectin-based products has proven extremely effective in the control of lungworm. It has, however, also produced a population of highly susceptible individuals, as the low level exposure to lungworm required to maintain immunity is not present. Introduction of lungworm to such a population through purchase of livestock or a change in grazing location (e.g. an out-farm) can be detrimental to susceptible populations and death due to parasitic pneumonia can result. This truly highlights the difficulty in achieving appropriate parasite control across a number of parasites. An extensive programme for the control of gutworm can prevent a build-up of immunity to lungworm in a grazing season, hence opening the potential for lungworm outbreaks.

It is therefore important to note that low level exposure to many parasites in Ireland is not detrimental to the calf or cow, and that dosing regimens can be best designed by regular submission of faecal samples to the laboratory from a selection of animals throughout the season. This will facilitate design of the most appropriate control programme for an individual farm.

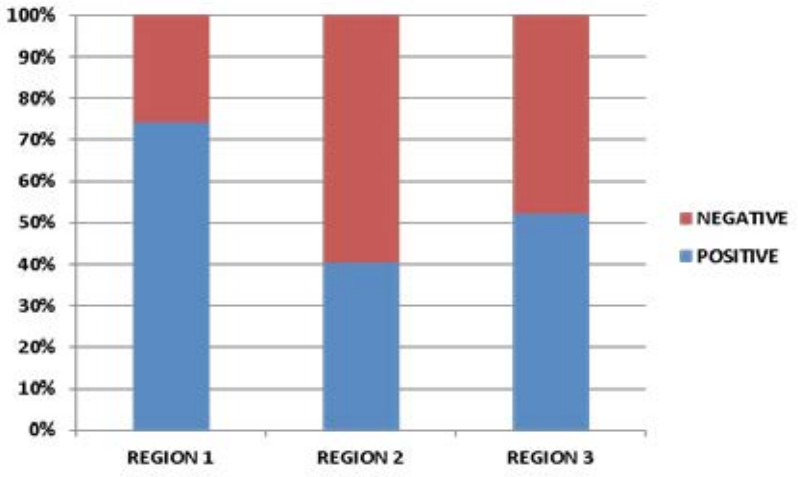
Finally, outbreaks of lungworm are often misdiagnosed, and IBR is often cited as the culprit. If a herd is vaccinating correctly against bovine herpesvirus-1 (causative agent of IBR), it is highly unlikely that an outbreak of respiratory disease is due to this virus. Many outbreaks, once thoroughly investigated are found to be related to a lungworm infection. Although faecal testing does not always highlight the presence of lungworm, it is important to faecal sample a number of animals with clinical respiratory disease to check for lungworm larvae. A positive result should always be treated as a significant finding and treatment initiated. If clinical signs are highly indicative of lungworm, immediate treatment of coughing individuals may be warranted on welfare grounds.

F. hepatica

Liver fluke continues to impact on dairy, beef, and sheep farming enterprises worldwide. The cost of liver fluke globally is estimated at €3 billion with Irish estimates approximated at €90 million annually. The past number of years has seen the prevalence of liver fluke increase up to 12-fold across Europe. On this basis, Teagasc, Moorepark established a 'Herd Ahead' project in 2009, which generated epidemiological data on a number of infectious diseases including liver fluke. In this study an overall prevalence of liver fluke of 75% was found in dairy herds. An awareness campaign by both Teagasc and Animal Health Ireland has been underway since 2010 and as part of the Department of Agriculture, Food and the Marine (DAFM) funded FLUKELESS project, a prevalence

update study was conducted in late 2014. The overall prevalence recorded in 2014 was lower (55%) and regional variations were recorded (Figure 1).

Figure 1a: Map of Republic of Ireland outlining the location of study herds within three regions of differing dairy animal density, soil type and rainfall. 1b: Prevalence of exposure to liver fluke in dairy Irish herds in three different regions in 2014.



Although the improvement in prevalence is notable, dairy farmers must remain vigilant and continue to strategically dose herds on the basis of test results. Teagasc research has found early November a useful time to sample herds using bulk milk analysis. This will allow administration of appropriate products while animals are housed over the dry period. It should be noted that dosing animals at pasture is not ideal as re-infection will continue to occur on contaminated pastures. The number of flukicide products available for use on dairy farms remains restricted. See www.hpra.ie for the most recent information.

The liver fluke forecast for winter 2015 predicts a significant risk of liver fluke in all parts of the country and a high risk in Western counties (Figure 1).

Paramphistome species

Clinical disease due to rumen fluke is not common, but infected animals can lose weight rapidly, have a bottle jaw, be dull, anaemic, dehydrated and have watery or even bloody scour. For years, rumen fluke were considered an incidental finding during routine parasite screening in temperate climates. However, recently, more and more suspected outbreaks have been reported and rumen fluke should now be added to the diagnostic regime on a dairy farm.

Based on current knowledge the potential losses from liver fluke far outweigh the losses that may be incurred from rumen fluke, although some individual farms may experience poor performance and mortality due to rumen fluke. The only product available that is active against rumen fluke is oxyclozanide and the only product in Ireland licensed in dairy cattle is Zanil.

Conclusion

Control of parasites in Irish dairy herds is complex. It is important therefore, to identify the parasites requiring control on your farm using diagnostic testing. Once identified, use an appropriate dose and follow manufacturer's instructions carefully. Always remember that you vet can provide technical assistance in planning a diagnostic and dosing programmes appropriate to your farm. Technical leaflets on all the parasites of interest to Irish dairy farmers are available from www.animalhealthireland.ie or on request from your veterinary practitioner.

A closer look at stocking rate for expanding dairy herds

Joe Patton & Donal Patton, Teagasc

Summary

- Optimum farm stocking rate is greatly influenced by annual grass production
- Increasing stocking rate beyond grass growth capacity of the farm results in a significant rise in feed and fixed costs
- Stocking intensity should not compromise the herd's ability to produce >80% of liveweight as milk solids annually

Introduction

Stocking rate, classically defined as livestock units (LU) per unit area of land (e.g. cows per hectare), is a primary determinant of grazing efficiency, feed supplement input, milk yield per cow and milk output per ha in grass-based dairy systems. It is clearly a driver of profitability so defining optimum stocking rate is a key consideration for farm management. The objective is essentially to achieve a stocking rate which maximises revenue over input costs, though issues like labour input, infrastructure and environmental impact, are important also. Despite its simple definition, there are a number of factors that complicate decisions on stocking rate for an individual farm.

Factors affecting optimum stocking rate: why one size does not fit all

Milk response to stocking rate

An important point to remember with regard to changing stocking rate is that milk solids response is curvilinear in nature. Initially, where stocking rate is low and pasture supply is not limiting, milk output per cow and per ha both rise as a result of better pasture quality and increased cow numbers. Individual feed intake and milk solids yield per cow decrease as stocking rate increases further, but this is offset by increased grass utilisation resulting in an overall gain in milk solids output per ha.

Milk solids yield per cow and per ha ultimately decline if stocking rate increases beyond the point at which pasture utilisation is maximised due to increased cow maintenance requirements as a proportion of a fixed feed supply. This is manifest as a reduction in feed conversion efficiency (milk solids per kg pasture DMI) and milk solids output per kg liveweight. It may also have genotype-dependent negative effects on body condition score and fertility performance. As a general guideline, the system should provide adequate feed to allow the herd produce >80% of their liveweight as milk solids annually, otherwise the proportion of total feed being used for maintenance is too high. The options are to increase feed available, reduce cow liveweight or reduce stocking rate.

Grass production effects

Annual grass production (tDM) determines available feed per ha and is perhaps the single most important source of difference in optimum stocking rate between farms. Teagasc on-farm monitoring demonstrates a range of <8tDM to >15tDM per ha in annual grass production across farms within year. Total forage intake (grass plus silage) for a standard 550kg cow yielding 440kg milk solids is approximately 4.7tDM per annum, or 5.5t DM equivalent grass growth (to account for

losses). Thus the farms with lower recorded annual growth will support stocking rates less than 1.5LU per ha, while high growth rate farms are capable of carrying approximately 2.7LU per ha. The main limitations to grass production are soil fertility, reseeding, N application and grass budgeting. While research indicates higher stocked systems tend to grow more grass, simply loading more cows onto a fixed area without addressing these issues often leads to significant feed deficits at farm level.

Open feed systems and whole farm stocking rate

'Open' feed systems arise where herd feed demand exceeds growth capacity of the grazing platform, with typically 20% or more of the annual forage budget imported. This may be from leased land, directly purchased silage, zero-grazing or owned external blocks. It is not straightforward to quantify changes to cash costs of production in open systems, however a general guide is costs will rise by 1.5 to 2.5 cent per litre for every 10% extra imported feed. Ironically, the farms with highest milking platform grass growth have the lowest rate of cost change for extra imported feed, as most of this comes in the form of dry cow feed.

There is a real risk in the new milk production environment that many dairy farms will drift into higher cost open systems to feed expanded dairy herds, while simultaneously failing to manage fundamentals of grass production on the grazing platform. This needs to be guarded against as it would undermine cost competitiveness. The scale of external land required to meet total herd demand becomes considerable in such cases (Table 1).

Table 1: Milking platform stocking rate and grass growth affect whole farm stocking rate

Milking platform stocking rate	**2.5 cows per ha**		**3.2 cows per ha**	
Annual grass growth tDM per ha	**14.5**	**11**	**14.5**	**11**
Imported silage required tDM	0	50	73	144
External block - total ha required[1]	13	19	27	37
Whole-farm stocking rate LU per ha	2.45	2.19	2.48	2.16

[1] For silage plus rear 30 replacement heifers per 100 cows, assuming 9.5tDM ha grass growth

In this example, a 40 hectare grazing platform stocked at 3.2 cows per ha requires 37ha of external land blocks to meet silage deficits plus replacement heifer feed demand. This demonstrates how quoting milking platform stocking rate alone can be misleading. It is also interesting to note that annual grass production per ha is the key factor determining whole farm stocking rate, despite differences in grazing platform stocking rate.

Dairy feed efficiency measures - stocking rate effects

It is well established that utilising more grass per ha is strongly linked to increased dairy farm margins. Due to the cost advantage of grazed grass per unit of feed energy, this holds true across a range of farm scenarios. Grass utilised per ha is a function of milk solids yield and maintenance requirements, pasture growth and purchased feed inputs. It evaluates how efficiently the farm generates and harvests its own feed resource. A working target is 12 tonnes grass utilised per farm hectare.

Stocking rate impacts directly on grass utilised because it drives feed demand per ha- however

a guiding principle is that increasing stocking rate beyond the grass growth capacity of the farm results in no additional grass utilisation and accelerates feed and fixed costs. In practice, very high stocking rates (>4.5 cows per ha) often lead to a reduction in grass utilised on the grazing platform through inefficiencies in buffer feeding, higher post grazing residuals, and reduced focus on grass management principles.

One limitation of the grass utilised per ha as a profit metric is that it does not account for the balance between milk and feed maintenance costs; in other words high grass utilised could be achieved by over-stocking the farm at expense of reduced milk solids output.

A useful complement to grass utilised per ha is therefore comparative stocking rate (CSR), which is defined as kg of liveweight per tonne of feed available (grass plus supplements). A CSR of 90 to 100 (kg liveweight per t feed DM) is a reasonable target for maximising efficiency of milk solids production. Lower CSR values indicate wastage of feed (supplement levels too high and/or stocking rate too low), while higher values mean that the herd is underfed (stocking rate too high and/or supplement feed level too low for grass growth rate).

Conclusions

Quoting farm stocking rate as a simple ratio of cows per milking platform hectare can be misleading. Defining the optimum farm stocking rate requires good information on annual grass production, soil and cow type, fixed cost and labour structures. To drive dairy farm profitability, decisions on stocking rate should be made with the dual objective of maximising grass utilised per farm ha, and achieving milk solids output per cow of >80% liveweight. Good farm profit is achievable at a range of stocking rates if these principles are adhered to.

Getting your tactics right to manage through 2016

Patrick Gowing, Teagasc

Summary

Farmers will face many choices in 2016 which will either have a positive or negative impact on cash flow. This paper will outline the following:

- Current cash flow situation on Irish dairy farms
- Methods to building a Cash flow budget
- Positive choices to aid Cash flow

Current Cash Situation on Dairy Farms

While the Teagasc e-Profit Monitor is an important tool for management accounts it does not show the cash situation on farm. By taking the data from the e-Profit Monitor system you can take out all non-cash costs to find what the actual 'cash in' and 'cash out' on dairy farms. For the basis of this paper 525 e-Profit Monitors from 2014 were analysed for cash costs to determine the cash situation.

In 2014 the average herd size for this sample of farmers 121 cows. The average co-op price achieved in 2014 was 39c/l.

The surplus cash (includes SPS payments) in 2014 was, on average, €1,260 per cow. This however does not account for drawings, tax, principle repayments and capital reinvestment. A figure of €70,000 was then deducted from the total cash to cover the above omitted costs. This reduces the surplus cash/cow (net cash) to €560/cow.

As we project forward for 2015 using an average milk price of 29c/l net cash/cow is reduced to €92/cow on average.

Again as we look forward to 2016, and adjusting the average milk price further to 25c/l, the surplus cash position changes again. This reduces net cash/cow to -€141 on average. As with any average there is a wide range in the net cash on farms and the question is where is your farm within this range?

As you can see from these figures cash flow budgeting is essential for all farm as move into 2016.

Methods to Building a Cash Flow

The key to building a cash flow budget is to calculate the key costs that will vary in your budget. To calculate these costs break them down into how many inputs you require during the year for the farm to function. See examples in the table below:

Table 1: Silage Contractor Charge						
Total LU	**Tonnes/LU (fresh)**	**Total**	**Average tonnes/acre (fresh)**	**Total Acres**	**Cost/acre €**	**Contractor Charge €**
A	b	c=axb	d	e=c/d	f	g=exf
100	5.85	585	9	65	100	6,500

By calculating each cost individually you will deliver an accurate budget for 2016 which will allow you to then make decisions to positively impact cash flow.

Positive Choices to Aid Cash Flow

When deciding where to cut costs make sure you spend money in the right areas. Choosing to spread early nitrogen can have a negative impact on cash flow in the spring but will deliver increased grass growth over the year which will reduce costs overall.

Targeted culling of non performing animals can increase cash income from their sale but will also reduce costs throughout the year. Non performing animals are rarely profitable in a high price year so should not be carried into 2016.

Improving grass quality mid-season through grass budgeting can deliver higher milk performance per cow and allow the farm to reduce feed costs over the summer months.

No capital investment should be financed from cash. Capital investments need to be properly planned and financed.

All expenditure needs to have a positive effect on your farms profits and cash flow. Any expenditure which does not improve farm profits has to be questioned.

Conclusion

Planning for 2016 starts with a cash flow budget now. Planning in time and targeting critical expenditure for your farm will have positive effect on your cashflow.

Breakout Sessions

Wednesday, 9th December

Grazed Grass - Your lifeline in Spring 2016

John Maher, Michael O'Leary, Michael O'Donovan & Adrian O'Callaghan, Teagasc

Summary

- There has to be a greater focus on utilising early spring grass
- Early turnout to grass enhances profit primarily through lower feed costs but also conditions the sward for subsequent rotations
- Use the Spring Rotation Planner (SRP) to guide the first grazing rotation
- Spring Nitrogen (N) application is essential to boost grass growth on all the farm

Introduction

The main objectives of spring grazing management are to maximise the proportion of grazed grass in the diet of the dairy cow and to condition the sward for subsequent grazing rotations. The importance of early spring grass in the diet of the dairy cow is well recognised. Benefits include the following:

- Improved animal performance
- Lower feed costs
- Lower costs of milk production

Early grazing will generate an increased profitability of €2.70/cow/day for each extra day at grass, primarily through lower feed costs. A higher milk price will be secured through improved milk composition (higher protein content). With low milk price projected for early 2016, it is imperative that every dairy farmer makes maximum use of grazed grass.

Grass supply in spring

The grazing season begins in autumn. Grassland management in autumn is the primary factor influencing the supply of grass available for grazing during the following spring. The main objective of autumn grazing is to finish the grazing season with the desired farm grass cover; thereby ensuring sufficient grass is available for early turnout the next spring.

An average farm cover of 900 kg DM/Ha on February 1st allows a farm operating at a stocking rate of 2.5 to 2.9 LU/ha (1 – 1.2 cows/acre) to turn freshly calved cows out full-time on a mainly grass diet. The first rotation should finish in early April and about 200-300kg meal/cow is required during this period. From recent research at Moorepark, feeding 3kgs meal/cow/day and allocating 13kg of grass DM/cow/day should be the target.

There are substantial improvements in overall grass production and utilisation by achieving early turnout to grass in spring. Targeting early turnout and high grass utilisation can increase the grass growing capacity of a farm substantially. Grazing the farm early stimulates the grass plant to grow more actively. Previous research at Moorepark has shown that grazing in early spring increases grass growth, grass quality and utilisation. Data from PastureBase Ireland would suggest that those farms that grow the most grass generally finish the first round of grazing in late March/ early April. This will enable more rotations to be completed during the grazing season.

Spring Rotation Planner (SRP)

The most efficient way to allocate spring grass is according to the Spring Rotation Planner (SRP). The SRP allocates an appropriate proportion of the farm each day for February 1st to early April. Using the planner to allocate grass will ensure that there is sufficient grass until the end of the 1st rotation. The key targets every dairy farmer needs to achieve in the 1st round of grazing are:

- 30% of the farm grazed by March 1st (1% of the farm should be grazed/day during February i.e. 1 acre per day on a 100 acre farm)
- 60% of the farm grazed by St. Patricks day
- 100% of the farm grazed by the 1st week of April

For the plan to be successful

- Stick to the planned area to be grazed per day
- Use a strip wire to allocate grass on a 12-hour basis
- The area grazed should be back fenced in wet weather to avoid pasture damage

Paddocks should be grazed to a residual height of 3.5cm in spring. Management strategies such as on/off grazing for 3 hour intervals should be used to ensure that cows have access to grazed grass without causing detrimental damage to the pasture surface. If progress is slow on reaching the targets set out in the SRP, then prioritise paddocks with lower covers of grass for grazing. This will allow the herd to move faster through paddocks as the area to be grazed will be larger.

Nitrogen

To increase grass supply in early spring and get grass actively growing, nitrogen (N) (either as fertiliser or as slurry) should be applied throughout the months of January/February/March. Spring Nitrogen (N) application is essential to boost grass growth on all paddocks. In good growing conditions, 1 kg of N has the ability to grow 10kg of grass DM during February.

The fertiliser/slurry recommendations for early spring are:

- Immediately after the closed period of fertiliser and slurry application, the land with the lowest cover of grass (<600 kg DM/ha) should receive slurry (about 2000-2,500 gallons per acre). Equally some of the first grazed paddocks could receive slurry. The remainder of the land area should immediately get 30 kg N/Ha (23 units/ac) of Urea. (Urea remains 30% cheaper than alternatives per kg N).
- In early March, some of the land area should receive 2,500 gallons of slurry per acre while the remainder of the land area should get 50 kg N/Ha (40 units/ac) of Urea.
- If you do not have time to spread fertiliser N and slurry, assign the task to a contractor as it is essential to get Nitrogen (N) out early.

The target is to have a total of 80-85 kg N/ha (65-70 units N/ac) through a combination of fertiliser N and slurry applied to the entire farm by April 1st.

Achieving a high six-week calving rate

Stephen Butler & Mark Trimble, Teagasc
& David French, Newbawn, Co. Wexford

Why is achieving a high six week calving rate important?

The removal of the milk quota regime is creating a significant opportunity for expansion within Irish grass-based dairy systems. In order to facilitate this expansion profitably, it is necessary to significantly increase both cow numbers and milk yield per cow. Earlier research has highlighted the greater importance of herd fertility to seasonal, compared to non-seasonal, milk production systems. A compact calving period in early spring is essential to match the intake demands of the cow to spring pasture growth.

The costs associated with reproductive inefficiency in dairy herds can be broadly divided into three main categories:

- The direct costs of increased calving intervals: higher culling rates, higher labour requirements, higher AI usage and greater use of reproductive interventions;
- Higher feeding costs associated with a poorer synchrony between calving and pasture growth pattern;
- Higher indirect costs including reduced expansion potential and in herds where animals are bought in, greater disease risks;

Many of these costs were examined in a research study reported by Shalloo et al. (2014). It was found that there is a significant association between the 6-week calving rate and survivability, calving interval and AI usage at farm level. Each 1% change in 6-week calving rate was associated with €8.22 /cow per annum for an average cow in the dairy herd. While the national average 6-week calving rate is currently estimated to be 57%, a target of 90% is achievable on dairy farms in the medium to longer term. Such an improvement is worth over €20,000 to the average Irish dairy farm.

Steps to improving six week calving rate

- Conduct a detailed analysis of herd fertility at the end of the breeding season. The first step must be to identify specific areas where fertility performance is inadequate;
- Heifer rearing and heifer reproductive management are critical for improving calving pattern. Achieving appropriate liveweight targets is vital; calving heifers at the start of the calving season is an essential to achieve a high six week calving rate and maximise productive lifespan in the herd;
- Breeding for higher genetic merit for fertility in the herd. A long-term goal is to breed a herd with fertility sub-index of €140 or greater in Holstein-Friesian cows or greater than €100 in first cross Holstein X Jersey dairy cattle;
- Correct management of BCS during the dry period, early lactation and breeding period is a vital component of herd nutritional and reproductive management.
  - The three key body condition score targets are ≥3.0 at drying off; 3.25 at calving; herd average of 2.9 at mating start date (range 2.75 to 3.25)
- Early identification of anoestrous cows allows time to take appropriate action. The use of the metricheck device to identify cows with reproductive tract infections is discussed in this session;

- Over time, shorten the breeding season to 12 weeks or less. Identify strategies to maximise both submission and conception rates during the breeding season.

This session will concentrate on two of the steps listed above in the drive towards higher six week calving rate:

- Identification and treatment of anoestrus cows and cows with reproductive tract infections;
- Body condition score targets

Questions that must be asked as a result of this analysis

- What is achieving a high six week calving rate worth on the average Irish dairy farm?
- What reports can a farmer use to identify the reasons behind a poor six week calving rate?
- What tools can a farmer use to improve the rate on his farm?

References

Shalloo, L., Cromie, A. and McHugh, N. 2014 Effect of fertility on the economics of pasture-based dairy systems Animal 8:s1, 222-231

Employing Labour - Getting the basics right

Nollaig Heffernan, Heffernan Consultancy; Olivia Harris, Workplace Relations Commission & Pat Clarke, Teagasc

Clarity in advance of employment

Being able to clearly articulate the role an employee has in a business removes much of the doubt, difficulty and dread that people have when it comes to employing labour and people management. To create this type of clarity, it is best to start from a business perspective and to challenge whether your business really needs additional staff, can finance additional staff or indeed whether you fully understand the implications of having staff?

Next you need to assess how well you run your business on a day-to-day basis. Writing procedures for each task in a step-by-step fashion not only generates useful documents which can be made available for new and existing employees, it also highlights inefficiencies in the system. Dairy farming comprises of many tasks which are routine and individual peculiarities often creep into the execution of these tasks. It should be established whether these peculiarities are a help, a hindrance or redundant habits that you have held onto over the years. Although tedious, this is a relatively cheap exercise that can lead to astonishing gains. You may even decide, at this point, that by streamlining your own work habits you eliminate the need for additional staff.

Having reviewed and challenged how the business is run, it is now time to identify the kind of skills you believe would make you a better manager of people as opposed to just tasks. People management is a learnable skillset and should not be feared as a 'you either have it or you don't' scenario. Human resource management training is a multi-billion dollar industry so there is a wealth of information available online, in books and through courses.

After this self-audit, you should be familiarising yourself with employment law and the necessary requirements to make you a legally compliant employer. Compliance is the 'set-play' of employment and its requirement that each employee be provided with the terms and conditions of their employment is a great starting place for creating a job description and job/person specification. The job description describes what you expect the employee to do and the person specification describes what you want the person to have to do the job e.g. milking experience, driving licence, etc.

Armed with your job description and person specification you are now in a strong position to start recruiting. Be reasonable in terms of your own expectations and the quality of the available employee pool. You may limit your choice if you are overly particular. Be clear about what is essential for your business and what is desirable but not critical. Recruiting the right person can take a long time so be proactive in your recruitment strategy and pre-empt the need for additional labour.

Finally, always keep in mind that by becoming an excellent employer, a variable you can control, you will inevitably attract excellent employees.

The legal requirements

Terms and Conditions of Employment are the basis of the employment relationship. These give a clear understanding to both parties and protect employees from exploitation and employers from false claims. Details to be Included in Terms and Conditions include:

- Name of employer and employee
- Address of employer
- Place of work
- Job title/nature of work
- Date of commencement of employment
- Duration/expiration of contract (if temporary, fixed term or fixed purpose)
- Rate of pay and pay intervals
- Hours of work (overtime/shift patterns/Sunday Work)
- Rest breaks (including a procedure for complaints)
- Annual Leave – other paid leave
- Sick Leave
- Pension Schemes
- Notice employee is entitled to receive, and obliged to give
- Collective agreements affecting employment
- Details of the employee's right to request and obtain written statement of average hourly rate of pay as per Minimum Wage Act, 2000
- Details of Grievance & Disciplinary Procedures (Good Practice)

An employee must be given a payslip with each payment of wages. A deduction can only be made from wages where it is required by law (Tax and Social Insurance), is made with the written consent of the employee or is provided for in the written Terms and Conditions (e.g. board and lodgings). The gross wage and all deductions must be shown on the payslip.

The maximum working week is 48 hour on average. Average is generally calculated over four months and in some cases over 6/12 months. Breaks must be given for 15 minutes within every 4 ½ hours' work, 30 minutes within 6 hours work and 11 hour daily rest period per 24 hours.

All employees are entitled to paid holidays. Entitlements are based on time worked. There are three methods of calculation dependent on hours worked: 4 working weeks in a leave year, one third of a working week per calendar month or 8% of hours worked (subject to a maximum of 4 working weeks).

Records to be kept on farm include employee details, payroll details including deductions, hours of work, written terms of employment, evidence payslips are given and annual leave and public holidays.

Further information, including some useful templates, are available on the Workplace Relations Commission (WRC) website, www.workplacerelations.ie

Why are you farming: more cash, more assets or both?

Seamus Kearney, Teagasc & Kieran Hearne, Co. Waterford

Summary

- Always farm for cash first.
  - Cash pays the bills and keeps the house running.
  - But cash flow can suffer short term if insufficient borrowing is used.
- Efficiency has to be excellent on farm before expansion.
  - Dairy expansion is expensive and you need youth on your side.
- Profit and net worth will increase.
  - Where expansion is efficient, planned and organised.

Why are you farming?

Did you ever sit down after dinner on a long winter's evening and ask yourself '*why am I farming?*' or '*why am I expanding my dairy enterprise?*' or better still did your spouse ever ask you these questions. More importantly were you able to answer these questions?

Farming is a busy occupation where doing often takes priority over planning. In many cases, expansion revolves around '*filling another row in the parlour*'. Then next year you have extra heifers, and they will cost you nothing to bring into the herd, as '*they are there anyway*' and you may as well fill another row. Oh, now the bulk tank is too small, but '*you can get a grant anyway*' and the sheds are full to overflowing. You might need to think about building. Now you eventually come in at 9pm after a wet day in February and start to eat some supper and your wife asks, '*what are you killing yourself for?* You scratch your head and wonder. In many cases this is the extent of planning on dairy farms where the end goal is never identified.

Always farm for cash first

Once you know where you are going and why you are going there (planning) the next stage is to implement the plan. The plan should answer the following questions;

- Why are you farming/expanding?
- How are you going to expand?
- Where are you now?
- When do you finish your expansion?
- ***What will it cost and what funding will be used?***

Answering the first four points is the physical element for the plan, but point five is the most important as this is where the question "*why are you farming, for more cash, more assets or both?*"

If expansion is carried out from an efficient profitable base then it will deliver increased profit and grow net worth in the long run. Increased profits will help run the household, pay the tax, service debt and in some cases will leave surplus cash available. In turn by increasing stock numbers and values and by paying down debt you will be increasing your assets and reducing your liabilities, thus increasing your long term net worth position.

So if you are increasing net profit and net worth by expanding from an efficient profitable base surely you must be increasing your cash flow position as well? This is the biggest mistake made by dairy farmers thinking that increased profit means increased cash flow on farm, thus the farmer carries out too much expansion out of day to day cash flow. The main areas of expansion funded out of day to day cash flow are capital expenditure and stock increases (because the extra heifers cost you nothing!! Yes they do, you are buying them from yourself, but you are not getting paid for them). Profit and net worth will increase from an efficient profitable base. Cash flow will deteriorate for five to six years; if there is insufficient borrowing to fund expansion (you are constantly broke!). But the good news is that if expansion is funded properly out of long term debt (10 to 15 year debt), cash flow can be maintained over the period of dairy expansion.

Conclusion

Farming for cash always comes first on the farm. If expansion is profitable then it will service the relevant debt associated with it. By putting debt over 10 to 15 years it takes pressure off cash flow and keeps cash flow increasing in line with growing profits and net worth. If borrowings are not structured correctly cash flow will be insufficient and the farm will constantly struggle to meet commitments.

Consequences of lack of financial planning

Philip O'Connor, IFAC

Farmers who farm for lifestyle run poor businesses, but farmers who run their farm as a business have a great lifestyle.

A financial analysis process should begin with consideration of the farm business as a whole. What is the financial condition as evidenced by the balance sheet and a review of net worth? How much debt is there? Is the debt manageable given the requirements for obligations such as taxes, family living expenditures, and business expansion? Where are my profits going year to year? Am I increasing my net worth? Have I the "cash" to meet my weekly / monthly commitments throughout the year?

Farmers in expansion phase need to balance their commitments in paying for the expansion (increase in stock numbers, increases in land via lease / purchase, capital expenditure, increased loan repayments) versus their already existing financial commitments such as their own/family living expenses. In low milk price year, financial planning is vital in understanding can you meet all of these commitments?

Knowing the answers to these questions will allow the farmer to gain control. To pave out a path they are ready and able for. A good foundation is half the battle in running a successful business. The first step in this process is to understand what Net Profit is, where it goes, how it impacts cash flow, and whether it is increasing my Net Worth.

Net Profit

In accounting, net profit is equal to the gross profit minus overheads minus interest payable for a given time period (usually: accounting period). In other words all of the trading income a farm generates minus all the variable and fixed cost in generating that trading income. However farmers must understand that "Profit" is not the bottom line. The "profit" is used to finance the following on the farm over the given period:

1. Non Farm expenditure – usually living expenses
2. Capital Loan Repayments – only interest is allowable as an expense when calculating Net Profit
3. Tax
4. Capital Expenditure

Cashflow

Cash is to a business as air is to the human body. Consider the consequences of the body being starved of air – yes, it would cease to function. Even if the air supply is restricted it can result in significant damage to the body. Lack of sufficient cash flowing through a business has the same effect. In essence cash flow is accounting for all actual monies as they enter and exit the business. It does not account for buying or selling goods / services on credit but rather reflects when these monies for purchases / sales enter the farmer's bank.

Net Worth

A farmer's Net Worth is reflected on their Balance Sheet at year end. It is the Total Assets (land, buildings, machinery, deposits, cash, stock, investments) **OWNED** by the farmer less all liabilities (merchant credit, loans, overdraft, land loans) **OWED** by the farmer at a given time. Usually on farm accounts this is calculated at year end and is shown on the Balance Sheet. If a farmer is investing in land, stock, investments or deposits, in theory his net worth will increase year on year as the value of his assets increases over his liabilities. Don't forget these "assets" have to be paid for! Where is this money coming from?

How do I monitor Net Worth Year on Year?

Net Worth, for the purpose of this article, is generated from using and retaining farm profits (an individual's Net Worth can also increase from outside sources e.g. inheritance, pensions, investments, spousal income or increased value of existing assets). Farmers need to understand how their profits are used and review the impact it is having on their Balance Sheet and therefore Net Worth. In IFAC Accountants we provide our clients with a Source & Use of Funds Statement which shows exactly where their profits are going, how it impacts on their Balance Sheet and whether their Net Worth increased or decreased.

Source & Use of Funds Statement			
	€		**€**
Net Profit/Loss (as per P&L Account)	97,040.00	Purchase of Land/Quota	
		Purchase of Capital Items	20,000.00
Add Back Non Cash Items			
Decrease in Stock Values	-	Increase in Stock	15,496.00
Depreciation	34,060.00		
Sale of Capital Items	4,500.00		
Receipt of Capital Grants	11,366.00		
		Personal/Non-Farm	
Cash from Investments	5,900.00	Drawings	51,898.00
		Taxation	18,752.00
		Purchase of Investments	3,289.00
Total	**152,866 (A)**		**109,435 (B)**
The Deficit (A minus B has effected your Finances)		€43,431	
Loan Balances	Down	23,452.00	Positive
Overdraft	No change	-	No change
Cash on Hand/Deposits/ Debtors	Up	7,082.00	Positive
Creditors	Down	12,897.00	Positive

What does statement tell me?

The above figures show that this farmer has increased his Net Worth over his accounting year. After all "cash" was taken in and all "cash" paid out this farmer's Net Worth went up by €43,431. His loans went down, his creditors went down and his cash / deposits went up. If A minus B was negative, this "deficit" has to be paid for. How would this happen? Increased loans, increased creditors, decreased deposits / cash.

Fixed Assets & Valuations

Net Worth can be increased on the Balance Sheet by increasing the value of the Fixed Assets e.g. Increase the value of individual livestock, increase the value of land. Building and machinery will decrease in line with depreciation which is reflected on your Profit and Loss account. It would be IFAC advice for the purposes of calculating Net Worth that land values and stock values remain constant and therefore will only affect Net Worth on an increase in livestock numbers or the purchase of land area.

Practical examples of cash starvation impacting on cashflow and living expenses

Expanding dairy herd

Dairy farmers favour the building up of their dairy herd from their own stock replacements rather than buying in. This minimises disease risks and an immediate cash out-flow. However, it does mean a gradual cash out-flow over a two year period of approximately €700 (Teagasc estimate), Add to this the fact these costs will not be tax deductible as a taxable expense because they are balanced by the fact that the animal is valued in closing stock. Stock Relief may be available at 25%, 50% or 100%. Twenty home reared entrants into the dairy herd will use €30,000 cash over the two years – this needs to be built into the cash budget otherwise there may be no cash available to pay farm expenses, loan repayments and most importantly the farmers own living costs as they fall due.

Farm Development

To cope with extra livestock numbers, increased output and improved efficiencies farm investment may be necessary. Cash starvation can arise here due to a variety of the following reasons:

- The total cost not being accurately quantified at the pre-planning phase.
- No provision being made for contingency over-runs. We recommend a 10% - 20% contingency cost provision for over-runs.
- No quotations being sought from building contractors and suppliers, and if sought restricted to one contractor/supplier.
- Quotation not being compared with standard farm costings for similar work e.g. Teagasc costings.
- No provision for actual date of payment of building (if applicable) grant of payment i.e. bridging finance.
- Funding from the current account and or greater merchant credit debt which puts huge pressure on cashflow and again the farmers own living expenses
- Not factoring on your cashflow the capital loan repayments if borrowing for the capital expenditure.

All or a combination of the above results in a cash shortage, mis-management of the current account, greater reliance on expensive merchant credit with consequent inability to pay debts as they fall due and huge pressure on the family farm living expenses.

The Capital Repayment Trap

The profits shown on a farm Profit and Loss Accounts only shows bank interest payable but not the capital repayment element of loan repayments. The capital repayment element has to be funded from after tax income.

Example: The annual loan repayments in years 1, 4 and 7 to a bank on €50,000 borrowed over seven years at 6% to purchase land is as follows:

Annual Repayment	Interest Portion	Capital Portion
Year 1 - €8,950 (100%)	€3,000 (33%)	€5,950 (67%)
Year 4 - €8,950 (100%)	€1,850 (21%)	€7,100 (79%)
Year 7 - €8,950 (100%)	€500 (5%)	€8,450 (95%)

From this example you can see that the tax deductible interest element of the repayment in Year 1 of €3,000 is 33% of the total amount repayable which drops to €500, being 5% of the total annual payment in Year 7. A farmer taxable at 50% tax rate (including levies, PRSI, USC) would have to earn €16,900 profit before tax in Year 7 to repay the €8,450 capital element to the bank. It is therefore vital to understand the difference between the yearly profit as shown on a Profit and Loss Account and the actual surplus cash that requires to be generated in order to meet the capital element of loan repayments. Annual cash flow budgeting is vital to run a farm profitably and successfully.

Conclusion

Farmers need to be conscious of the fact that although they may be increasing their Net Worth through the purchase of assets or expanding their livestock numbers they need to be aware that these assets have to be paid for out of cash flow. If a farmer is not generating enough profit to meet all of their financial commitments their Net Worth (ignoring the impact of increases in asset values) will decrease as their liabilities increase while their assets remain static or decrease. As the farm is starved of cash flow in meeting its financial commitments, inevitably the living expenses will also come under increasing pressure.

Get the 2016 lactation off to a good start!

Finola McCoy, Animal Health Ireland

Summary

- Reduce exposure to environmental bacteria at calving
- Mind your heifers
- Bring cows in for milking, as soon as possible after calving
- Milk out all quarters after calving
- Find, mark, treat and record clinical cases promptly

Introduction

The period around calving i.e. 2 weeks before to 2 weeks after, is the highest risk time for mastitis infections to occur. What happens around this time can have a critical impact on the infection status of the herd for the rest of the lactation. Prevention of mastitis is key, combined with early detection and prompt treatment.

Tip 1: Reduce exposure to environmental bacteria at calving:

- Housing and calving areas must be clean and dry:
  - **Indoors:** If your knees are wet after kneeling down, it's not dry enough for calving cows.
  - **Outdoors**: if water is visible on the ground surface or in your wellie prints, it is not dry enough for calving.

Tip 2: Mind your heifers:

- Minimise stress:
  - Train them ahead of time to the milking parlour, and take your time moving them
  - Teat disinfecting twice a week in the last 2 – 4 weeks before calving will reduce the challenge from environmental bacteria.
- Attend to heifers with oedema (flagging) – milk them out before calving if necessary.

Tip 3: Bring cows in for milking, as soon as possible after calving:

- Do not leave cows dripping milk - bring them in, check udders, machine milk and disinfect teats ASAP after calving.
- Milk cows out completely.
- Do not use incomplete milking as a milk fever control method - it can increase the mastitis risk. Discuss appropriate milk fever prevention with your nutritionist or your vet

Tip 4: Milk out all quarters:

- Look for heat, pain and swelling in quarters of freshly calved cows
- Wearing gloves, carefully forestrip all quarters - avoid getting milk on your gloves

Tip 5: Find, mark, treat and record clinical cases of mastitis:

Remember, a case of clinical mastitis which requires treatment is when there is heat, swelling or pain in the udder, or there are changes in the milk (wateriness or clots) that persist for more than 3 squirts of milk.

- Finding cases early allows prompt treatment
- Mark cows immediately
- Take a milk sample for culture, before starting treatment. Samples for mastitis culture can be frozen, and stored for up to 4 months. If you've had > 2 clinical cases in the past 30 calvings, these frozen samples should be used to investigate the cause
- Administer a full course of antibiotic treatment
- Record all details:
  - keep a permanent record of all mastitis cases (a notebook, farm diary or on the ICBF system)
  - record all antibiotic treatments in The Herd Register
  - record cow numbers on your whiteboard in the parlour SO YOU AND YOUR MILKERS know which cows are now OUT OF THE TANK!
- Take advantage of the ICBF "text-in" service for clinical cases. Just text details of the case to **089-4577663** -you can even do it from the parlour! ICBF will record all the cases for you, which is invaluable for keeping an eye on herd performance.

  What to do:
  - For example, to record a case of mastitis for cow Freeze Brand 627, text **Mast 627** to **089-4577663**
  - The case of mastitis will be recorded as having occurred on the date the text was sent, unless you specify otherwise e.g. **Mast 627 18/01.**
  - Contact ICBF to register for this service

For more information and mastitis prevention tips, see the *CellCheck Farm Guidelines for Mastitis Control*.

Administration of an internal teatsealant to in-calf heifers pre-calving

Niamh Ryan, Noel Byrne & Jim Flynn, Teagasc
Seán Arkins, Department of Life Sciences, University of Limerick

Summary

- Administering internal teatsealant (ITS) to heifers pre-calving could be considered on farms where heifer mastitis is an issue or a potential issue.
- ITS should be administered to in-calf heifers 4-6 weeks before expected calving date.
- There is no antibiotic in the formulation and so excellent hygiene is an absolute must when administering ITS.

Pilot study

A pilot study investigating the impact of administration of an internal teat sealant (ITS), to in-calf heifers before calving, is in progress on four Teagasc farms. Studies overseas have shown favourable results but there is currently no Irish data.

Background

ITS forms a physical barrier in the teat canal which helps to prevent bacteria entering the mammary gland and causing mastitis. A heifer/cow's own seal isn't intact as she starts to spring up and so ITS strengthens her own natural seal. There is no antibiotic in the formulation and so excellent hygiene is an absolute must when administering ITS. Also good facilities, good help and plenty of patience are essential, otherwise there is potential for disaster such as damaged teats, severe mastitis.

The practise of administering ITS to heifers pre-calving might be considered on farms where heifer mastitis is an issue (e.g. >15%) or a potential issue e.g. <1 cubicle/cow, heifers at contract rearers, on slats etc. ITS should be administered 4-6 weeks before expected calving date. Heifers represent almost 25% of the national herd and are the most vulnerable members. Preventing mastitis in first lactation has been shown to maximise potential future milk yield and longevity within the herda. Optimal milk yield depends on adequate development of mammary epithelial cells during the peri-parturient period. Events that interfere with these processes will decrease her capacity to produce milkb.

Study protocol and experimental design

In-calf heifers from four Teagasc farms were treated in batches depending on their calving date. Two herds were treated in the milking parlour and two others in a race. The heifers were familiarised with treatment location before the date of infusion. All teats were disinfected using cotton wool soaked in methylated spirits, concentrating on the teat end. Quarter samples were then taken. The teats where disinfected once more and ITS administered to contralateral quarters. The remaining two quarters served as untreated controls. The split-udder design means each heifer acts as her own control. The teats were teat-sprayed immediately after treatment. There were a small number of quarters (<5%) that had small teat orifices and were difficult to infuse, otherwise administration of ITS into the teat canals of heifers was not difficult. All blind quarters, presence of warts etc.

were documented. Heifers were allowed to stand for 15 minutes to allow teat canal to close before returning to housing. They were closely monitored daily during the dry period to check for swollen quarters or signs of systemic illness. At 1st milking after calving, all heifers were quarter sampled. Bacteriological and somatic cell count (SCC) analysis of the samples was carried out. This was repeated 14 (+/-3) days post calving, at mid-lactation and at drying off.

Overseas study

In 2007, Parker et al3 published their findings on the effect of administration of ITS to in-calf heifers on intra-mammary infections (IMI). Their study involved 255 heifers on 5 seasonally calving, pasture-based farms in New Zealand.

Key findings

- Gland prevalence of IMI pre-calving = 15.5%
- IMI pre-calving increased the risk of an IMI (subclinical & clinical) post-calving
- Infusion of the teat sealant reduced the risk of post-calving IMI due to Streptococcus uberis by 84% and of clinical mastitis by 68%,
- Sampling the glands pre-calving had no effect on post-calving IMI or on clinical mastitis incidence.

While these findings clearly advocate the use of ITS in in-calf heifers, some degree of caution should be employed as their pathogen load and wintering systems vary somewhat from our own. While environmental pathogens e.g. Streptococcus uberis are their major challenge, ours are likely to be contagious. Their heifers tend to be out-wintered while our heifers are generally housed.

Conclusion

Analysis of the data collected from the pilot study is currently underway. These results should point the way in terms of whether pre-calving administration of ITS to in-calf heifers is beneficial in Irish dairy systems.

References

a Archer SC, Mc Coy F, Wapenaar W, Green MJ. Association between somatic cell count early in the first lactation and the longevity of Irish dairy cows. J Dairy Sci. 2013;96(5):2939-50. doi:10.3168/jds.2012-6115.

b Sordillo LM. New concepts in the causes and control of mastitis. J Mammary Gland Biol Neoplasia. 2011;16(4):271-3. doi:10.1007/s10911-011-9239-8.

c Parker KI, Compton C, Anniss FM, Weir A, Heuer C, McDougall S. Subclinical and clinical mastitis in heifers following the use of a teat sealant precalving. J Dairy Sci. 2007;90(1):207-18. doi:10.3168/jds.S0022-0302(07)72622-X.

Setting up a Second Dairy Farm

Padraig French and John J. McNamara, Teagasc

Summary

- Setting up a second milking platform can be a profitable and rewarding venture if it is operated to a high level of efficiency
- Before investing in such a venture a budget should be completed to estimate the total capital required and the return on the capital invested
- Project managing the set-up of an existing farm has a significant time requirement and the performance of the existing farm may suffer if extra labour is not sourced to cover the set-up phase.
- There is no minimum size for a second unit provided that it meets the targeted return on investment after accounting for full costs
- There will be a much better return on investment and effort in getting the existing milking block to optimum efficiency than in replicating a below optimum system

Introduction

Post milk quotas, the land available contiguous to the milking parlour will be the most limiting factor for profitable expansion on many farms. Where extra land becomes available adjacent to the milking platform it will usually give the best return on investment as the benefit of scale will usually increase the efficiency of labour and capital use. For many farmers with fragmented farms the temptation will be to increase the stocking rate on the milking block and harvest feed in the form of silage or fresh cut grass for transportation back to the milking block. The outcome of such a system will be a reduction in the proportion of grazed grass in the cow's diet, an increase in the cost per litre of all milk produced and a system of production that will only be profitable in years of above average milk prices.

Another option for profitable use of an outside block of land either owned or rented is the construction of a second milking platform that could be managed as a stand-alone operation or in conjunction with the existing block. To determine the feasibility of such an option, one needs to firstly determine how the farm will operate relative to the existing farm, then complete a capital budget for the set-up of the farm and finally complete a detailed cash flow and profit prediction for the farm to determine if the venture gives an adequate return on the capital and resources required.

Preparing a budget

To determine if the project is viable and affordable it is essential that a detailed budget is prepared. This should include a capital budget to determine the total capital requirement of establishing the second unit and an operating budget. Cash flow and profitability must be estimated. Where the new block is rented it will be essential to depreciate all of the capital investment during the lifetime of the lease in calculating the profit from the venture.

Capital Investment

If the objective of the second milking block is to give a good return on capital then the capital

investment should be minimised. However, there will be a requirement for a significant capital investment in the set-up of a new milking block and this should be prioritised towards the infrastructure that will facilitate the efficient conversion of grazed grass to milk. This will include the milking facilities, the grazing infrastructure of paddocks, roadways and water and the soil fertility requirement to achieve high grass production and utilisation. Depending on the scale of the two blocks being farmed and the resources already available, the extra cow wintering and calving facilities could be located on either farm depending on how the farm will be operated. Capital investment in new milking facilities can be expensive per extra cow milked but there is significant potential for the use of second hand equipment in smaller scale units.

Operating two farms

When the full costs of the new unit are accounted for including, labour, capital and land, the total cost of production will be quite high and unless the unit is managed at a high level of efficiency it is likely that it will lose money in low milk price years. There will be a much better return on investment and effort in getting the existing milking block to optimum efficiency than in replicating a below optimum system. To simplify the operation of two dairy farms and gain efficiencies in operation it is essential that both farms operate a broadly similar production system. There are numerous potential efficiency gains from operating two farms together depending on the scale of both farms, the facilities available and the distance between them. The most viable option for managing the farms could involve wintering and calving all of the cows at a single site for labour and machinery efficiency and reduced capital construction cost of the extra wintering facilities required. It may also be possible to share labour between both farms during the milking season depending again on scale and distance.

Improving Performance with ICT

James McDonnell & Fintan Phelan, Teagasc

Summary

- Information and Communications Technology (ICT) equipment is readily available
- ICT software for agriculture requires significant development; end users will need to participate in this process. A critical mass of users is required to make further developments cost effective
- ICT usage must be critically assessed to ensure a net gain in time, money or performance for any investments made.

Introduction

Rural dwellers and farmers in particular are known to be a group of people who are late adopters of certain technologies (DAFM report 2010 on ICT in Agriculture and Rural Communities). Smart technology is viewed by farmers and wider agricultural industry as a method to reduce the administrative burden on Irish farmers, but also as a method to deliver faster, more timely measurements to aid decision making at farm level. The availability of the "smart phone" over the last few years gives the industry a new method to interact with farmers using "smart phone applications" (apps) that can send notifications or reminders that could be used to harvest information to enable the farmer to better manage their business. We must also critically analyse how we use or misuse this new technology. It must help us to manage our time and business better, instead of becoming an addiction that gets in the way of achieving our key performance indicators. The availability of broadband for some applications is a barrier in some areas of the county, but this should be addressed as broadband becomes more available

Usage of ICT

In 2011, the Teagasc National Farm Survey (NFS) conducted research on the use of ICT on farms in Ireland. By 2011, 33% of farmers had a personal computer (PC) and used it (or another family member) for business purposes. The research indicated that the PC was used by farmers for:

- Internet and communications
- Herd Register
- Submitting forms
- Online Banking
- Purchasing products and services
- Selling products and services
- Farm Accounts
- VAT returns

Table 2 shows that when we look at the usage across the different sectors we can see that usage has grown over the years. Dairy farmers tend to be the early adopters of this technology. While the study is not that recent the trend is likely to have continued at a similar pace.

Table 1: ICT usage by farming system: 2011*			
Percentage of Farm Households	**2004**	**2008**	**2011**
Dairy	29	39	58
Cattle	7	14	28
Cattle Other	9	14	21
Sheep	10	18	26
Tillage	21	30	48
All	14	21	33

Challenges

Dairy farmers have significant variation of workload in the production cycle. In springtime the physical workload and administration can peak together, for example with cows calving and calf registrations occurring together. Grassland measurements, Nitrates Derogation and CAP applications all require office time. ICT should offer opportunities in this area. Apps like herdwatch and grasshopper help immensely in managing some of the day to day chores. Other general Apps like met.ie can be used as a decision support tool to plan chores like slurry or fertiliser spreading. There is however plenty of shopping apps that have the potential to suck time through their notifications and alert features and should be classified as a distraction. This is an area that we all should be wary of. ICT could be an expensive area to invest in and one must be cognisant of the benefits of any new tool or device and that it will deliver for the purpose intended without unbalancing the normal farming priorities. A critical analysis should be undertaken to measure the cost in terms of time and money invested versus the savings of time, money and gain in performance.

Conclusion

There remains a great potential for many dairy farmers in the usage of ICT to help improve the efficiency of their administration and decision making. This potential is increasing as usage reaches a critical mass which allows developers invest in more useful systems and give more frequent updates and improvements. There is however a risk in this interim period between paper and virtual recording that those early adopters duplicate recording leading to inefficiency. While progress is being made, it is incumbent however on farmers to seek new and better ways of completing tasks, identify blockages to enable developers to improve their offering. It is also in their interest to encourage other farmers to start using useful tools to build the critical mass of users to drive improvements.

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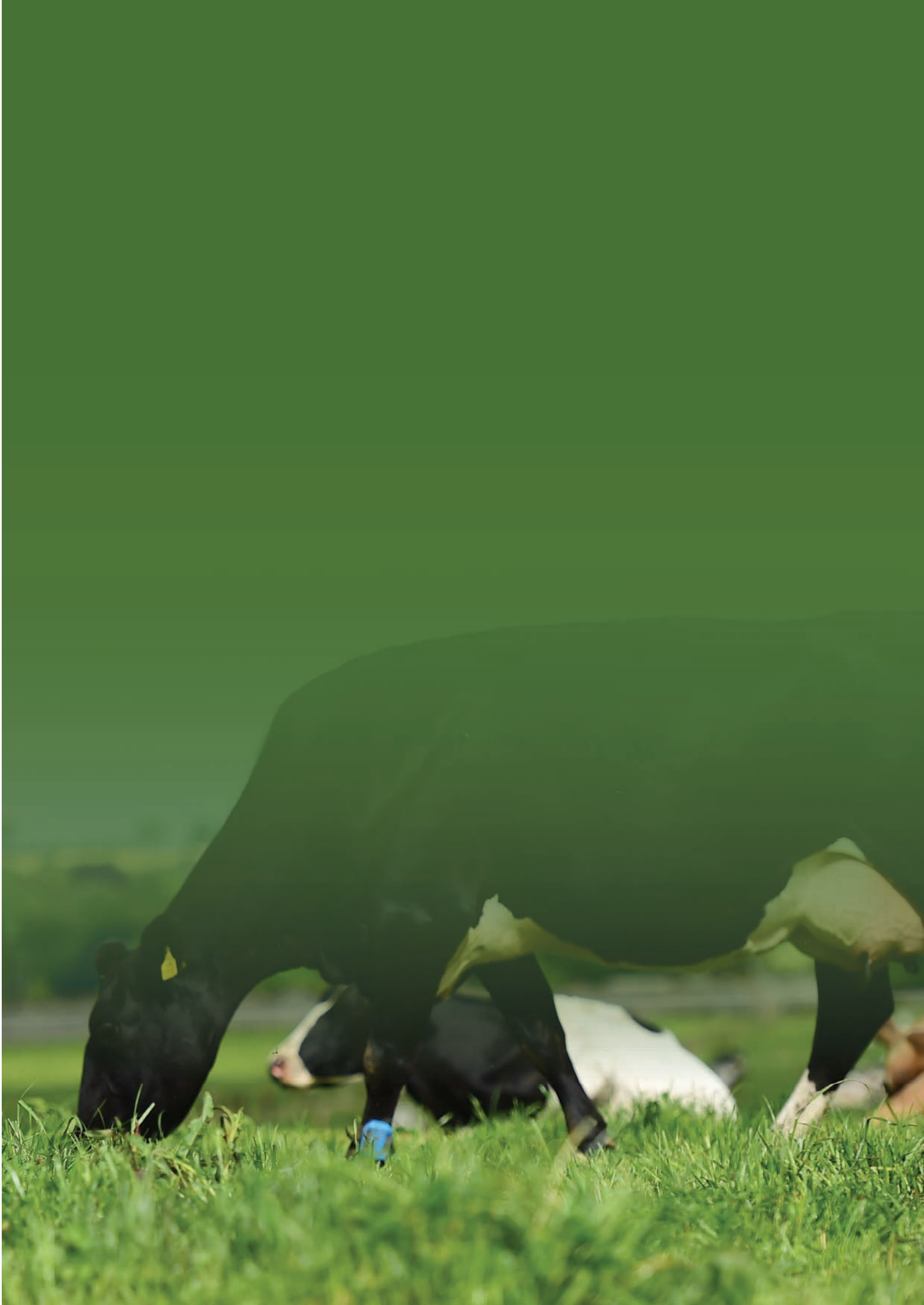

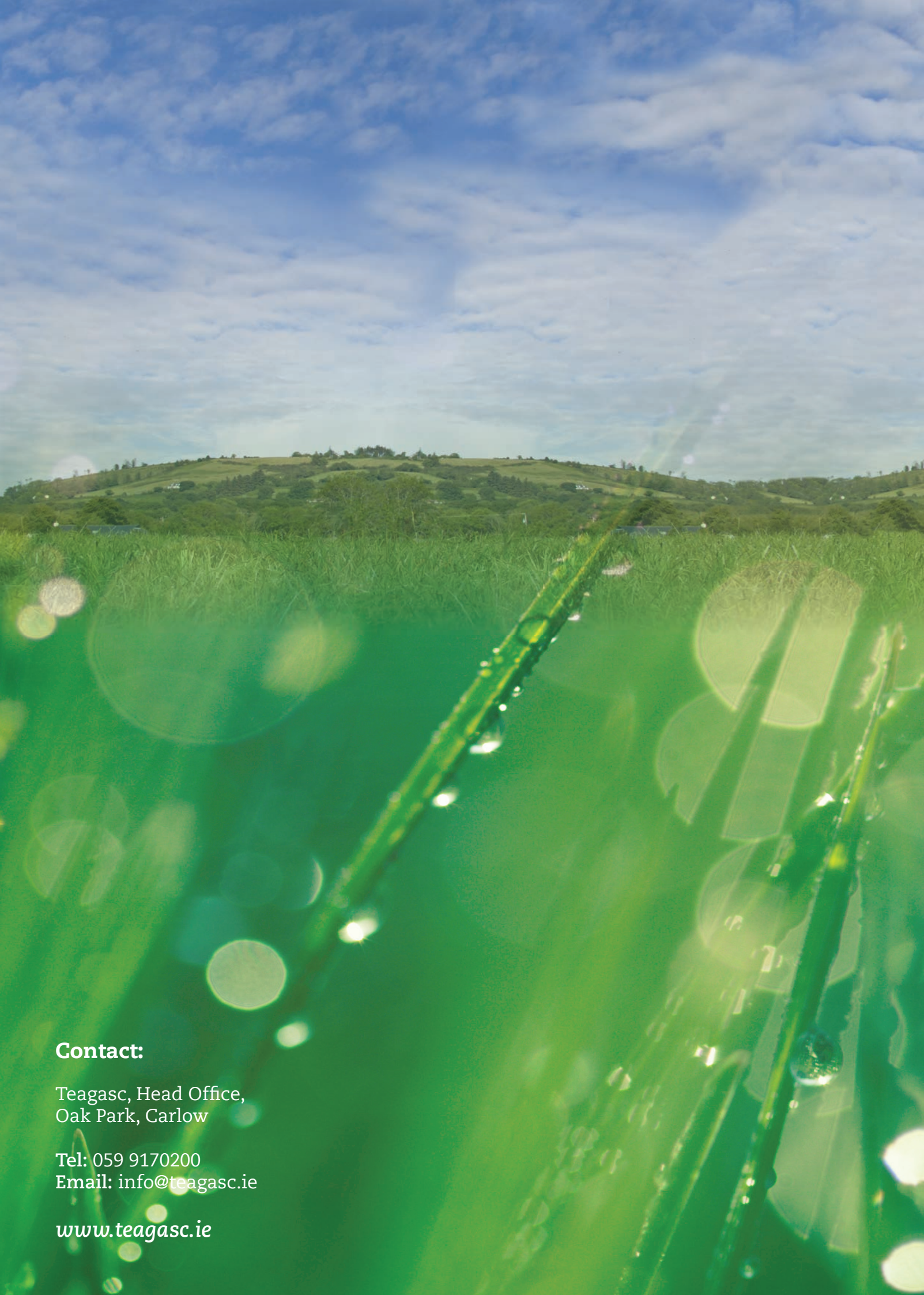

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