Q&A WITH PAT DILLON

Dr Pat Dillon is Head of the Teagasc Animal and Grassland Research and Innovation Programme. This means he is in charge of all Teagasc research into both dairying and drystock. Pat is a native of west Clare where his family were dairy farmers

1 Times have been relatively good in dairying in recent years, can this continue indefinitely?

I'm optimistic that the dairy industry in Ireland can continue to prosper. Globally, demand for dairy products is increasing all the time and we compete in premium categories in 120 countries worldwide. The FH2020 target was to reach 7.5 billion litres by 2020; this was surpassed in 2018. In 2019, Ireland will probably exceed eight billion litres; the fact that Ireland could reach this milestone so quickly has to be viewed as a huge success. Ireland could reach 10 billion litres by 2025.

But it's not just about production increases either. Our recent analysis of farm level trends indicates that Irish farmers are increasing productivity year on year through increased grazed pasture utilisation and this means that the quality of product we produce is increasing and the sustainability of our systems is improving in tandem with expansion.

The CSO report for this March indicated that average protein content of Irish milk was 3.31%. This is a great achievement that would have been unthinkable 10 years ago. While the base price per litre of milk has been flat for the last five to six years, most farmers are achieving a price four to five cents higher because of increased fat and protein levels due to better genetics and improved grassland management.

The future of the industry depends on having profitable farms that reinvest in improved systems. From an economic standpoint, the expansion has improved the profitability of family farms and brought more money into the rural economy. Farm costs/l of milk produced has actually reduced between 2013 and 2017.

The "Food Harvest 2020" strategy was a huge success with all stakeholders in the dairy industry playing their part; it provided clear targets and effective communication channels to all stakeholders. For example, the processing side of the industry has invested more than €1.5 billion in extra capacity.

2 What did we learn from the recent fodder crisis?

I think it's important not to be overly reactive to a poor grass year such as 2018. Grass is a valuable feed and when you get a combination of slow spring and dry summer, grass growth was reduced on many farms by three to five tonnes/ha. I think farmers managed extraordinarily well in the circumstances and this shows you how resilient Irish dairy farms are.

For sure, as farms expand, you do need to have an adequate amount of silage in the yard (in a pit or in bales) to manage during periods of poor grass growth and most farms have built these reserves on the back of last year which should stand them in good stead going forward.

We must be able to produce the feed for our animals, and it is good management practice to have a reserve of silage and cash available for unexpected contingencies. The silage reserve can be rotated with new production from year to year.

3 The EBI has served Irish dairying well over the last 20 years or so, how much further can it take the industry?

Average EBI (€) of the national herd is just under 100, and the target should be close to 200; at the current rate of progress we are 10 years from where we want to be. This means that the EBI can be significantly increased in most herds.

The EBI of the Teagasc Next Generation Herd is in the top 1% of cows nationally. Our research shows that high EBI cows are extremely profitable and further gain in EBI at farm level will continue to improve both the productivity and sustainability of our systems in the future.

4 If Ireland as a country/economy has to reduce carbon emissions, why should it prioritise dairy production?

In my view it's not about prioritising one enterprise over another but instead getting the best mix of land use across the landscape. In addition to milk, the dairy industry contributes around 50% of the raw material for the beef processing sector to a value of 1.2 billion euros annually.

I believe that the ongoing expansion of the dairy sector is also providing additional benefits to other land users in terms of contract rearing and feed supply opportunities which were not there previously. The performance of the dairy industry over the last five years has been unparalleled, both in terms of other indigenous sectors of the Irish economy and other international dairy industries.

Every €1 of additional dairy exports corresponds to an additional €0.90 spend in the wider domestic economy. The value of Irish dairy exports exceeded €4 billion for the first time in 2018, and accounted for 35% of total food and drink exports. Ireland's status as the lowest carbon emitting dairy sector in the Northern Hemisphere is recognised across a growing global customer base.

Restrictions on dairy cow numbers would conflict with the national objectives in FoodWise 2025 that seek to grow the contribution of the Irish agri-food sector to the Irish economy. It also makes little sense to restrict Irish dairy production for another country to produce dairy products at possibly twice the carbon footprint of Irish produced dairy products.

Continued on page 16

IN MY VIEW IT'S NOT ABOUT PRIORITISING ONE ENTERPRISE OVER ANOTHER, BUT INSTEAD GETTING THE BEST MIX OF LAND USE ACROSS THE LANDSCAPE

Today's farm

L-R: Tom O'Dwyer, Teagasc; Ann Marie Butler, Ulster Bank; Pat Dillon, Teagasc; Philip Cocoman, Ornua; Liam Herlihy, Teagasc chairman; Ailish Byrne, Ulster Bank; Michael Berkery, FBD; and Frank O'Mara, Teagasc, at the launch of Moorepark'19.

Continued from page 15

5 How can dairy farmers contribute to reducing greenhouse gas emissions and preventing climate change?

Ireland's status as the lowest carbon emitting dairy producer in the Northern Hemisphere is recognised across a growing global customer base and we continue to reduce carbon intensity over time. There are a number of management practices that dairy farmers can implement that will improve the sustainability of Irish farming systems and reduce emissions.

These include incorporation of white clover into grassland swards to reduce chemical N application, coupled with the use of protected urea fertilisers and low emissions slurry applications. Additionally, future systems will continue to rely primarily on high EBI cows fed highly productive pastures.

There are also a number of new products (such as 3NOP and Mootral) that are about to be launched on the market which have the potential to further reduce methane emissions by up to 30%. These have yet to be tested for efficacy in grass-based systems and we are undertaking this work now at Teagasc Moorepark.

6 As the Farm Labour event at Teagasc Moorepark last year showed, finding affordable, qualified labour is a challenge. What role will automation play in addressing that problem?

Automation in relation to milking (eg cow drafting, cluster removers in large parlours, automatic washing of the milking plant and indoor parlour feeders) can significantly improve labour productivity on dairy farms. The benefits of other automation are less tested on commercial farms.

Rotary milking parlours are becoming much more popular in herds of greater than 300 cows, with the objective of increasing labour efficiency and reducing milking times to less than 5-hours per day. As with all new technologies, a careful cost benefit analysis is needed prior to making investments.

"Good grazing infrastructure and an efficient milking system are a requirement on all dairy farms. Having good farm road ways, adequate drinking water, suitably sized and shaped paddocks with multiple access points (plus drainage systems where necessary) are essential to maximise grass utilisation, cow performance, cow health and labour efficiency. Additionally, milking efficiency can be increased by matching the number of milking units to herd size and improving cow flow through the parlour.

7 What advice would you give farmers who might be first-time employers?

Dairy farming must be a desirable job in order to attract and retain young people. The farming system needs to be labour efficient, and it needs to eliminate wasteful and often physically demanding tasks and long working days.

Additionally, there is a need for career progression pathways such as partnerships, share farming, leasing etc. in order to attract and retain talented young people in the dairy industry that may not have access to owned land.

8 We are perceived as a relatively high animal welfare milk producer. How can we protect that reputation, build on it, and get paid for it?

The Animal Welfare Advisory Council recently published Animal Welfare Guidelines for Dairy Herds. Irish pasture-based systems are perceived to be animal welfare friendly, thereby giving the Irish dairy industry a competitive advantage in international dairy markets.

It's critical that the welfare of animals on dairy farms is prioritised and maintained at a high standard at all times from conception to end of life; there is no excuse for poor animal welfare practices. Calves should receive adequate levels of colostrum immediately after birth (the 1-2-3 system is a good model) and provided with good housing.

Young calves should never receive poor animal treatment on farm or anywhere across the supply chain. While Irish pasture-based systems have many advantages in terms of animal welfare, we also need to be mindful of the need to operate best practice. Important indicators of dairy cow welfare include lameness, mastitis and metabolic disorders, and these should be kept to a minimum by imposing good management practices.

Farm infrastructure should be conducive to high animal welfare standards. The question about whether male dairy calves could be humanely slaughtered at a very young age is an ethical question. These calves have poor beef merit, and as a consequence have low economic value. That, however, can never be a justification for poor welfare practices. I don't think calves should ever be slaughtered on farms.

WE NEED TO WORK WITH THE BEST HUMAN NUTRITIONISTS TO DISPEL THE MYTHS SURROUNDING ALTERNATIVE FOODS

9 What can we say to vegans?

Estimates from Bord Bia are that somewhere between 1 and 2% of the Irish population are vegan; however NDC research indicate that 30% of young men and 41% of young women are limiting the amount of dairy they consume.

Similar to much of the plant based alternatives to dairy, nutritionally these alternatives are a poor substitute but that does not mean that we should be complacent. Dairy alternatives are generally composed of water and ingredients such as soya, rice, almond, oat, coconut etc, and are not nutritionally equivalent to cows' milk. It's uncertain that the calcium in fortified drinks is absorbed and metabolised in the same way as from dairy milk.

We need to work more effectively with the best human nutritionists to dispel the myths surrounding alternative foods in all forms. The scientific evidence tells us that the qualities of nutrients from milk are significantly better and that these key differences are particularly important for at-risk groups (such as growing infants, elderly people and pregnant women).

Plant-based milks are quite variable in what they contain, whereas cows' milk is very well standardised. Unfortunately, the nutritional inadequacies of such foods mean they are substantially lacking many key nutrients while also containing others in less bioavailable forms.

10 What do you see as the likely key technical developments in dairying in the next five years?

In recent times the use of genomic information has had a significant impact in increasing the rate of genetic improvement in dairy cow genetics in Ireland. Likewise the development of precision farming technologies such as PastureBase Ireland has played a significant role in the adoption of best grazing management practices.

New technologies in relation to sustainability will dominate over the coming years. In the next five years there will be a focus on the development of technologies that will reduce methane emission from ruminant livestock; improve farm nitrogen use efficiency; improve labour efficiency and animal welfare; and reduce the administration of both antibiotics and anthelmintics.

11 What message do you have for beef farmers?

It's essential that we get greater integration between the dairy and beef industry. The use of modern genetic and reproductive technologies has the potential to increase the beef quality of the progeny coming from the dairy herd. Currently 50% of dairy calves are bred to dairy sires and 50% to beef. If sexed semen becomes a viable technology we will have the potential to have even more beef/dairy crosses.