

## **EP 2: Building belief that good welfare practices enable cows to be more productive**

**Laura Rice says:** Welcome to the Care4Dairy podcast series. I'm Laura Rice. Care4Dairy has developed best practice guides to support the welfare of dairy calves, heifers, cows, and end of career animals. The guidelines consist of a series of fact sheets on key topics, some of which are discussed in the podcast series.

**Laura Rice continues:** The project is farmer-centred and has benefited from involvement of stakeholders from farming and veterinary organisations, as well as academia. There are four Care4Dairy podcasts, each looking at the different stages. In each episode of this series, I'll be joined by two guests, a representative from Care4Dairy and either a farmer, farm advisor, or veterinarian.

**Laura Rice continues:** Today we are talking about building belief that good welfare practice enables cows to be more productive. I'm joined by Dr. Joe Patton, head of dairy advisory with Teagasc, and our Care4Dairy representative, Dr. Luigi Iannetti, who is a veterinarian in the food hygiene unit in Teramo, Italy. Thank you both for joining me today to talk about this topic. Can I ask you to tell me a bit about your work in Teramo and how you became involved with Care4Dairy?

**Luigi Iannetti answers:** Good morning, Laura. I'm a veterinarian in a public veterinary health institute in Italy. And my work, as you have already said, is both in food safety and animal welfare. For animal welfare in particular, I'm involved in the activities of the European Union Reference Centre for the welfare of ruminants and equines. So, my work is mostly about this kind of species.

**Laura Rice asks:** And Joe, as Head of Dairy Advisory in Teagasc, what does your role involve?

**Joe Patton explains:** From a Teagasc perspective, we have 3 roles in the industry: education, extension and advisory and also research across those disciplines. Where my role sits is to translate the research work that happens, among ourselves and externally as well, translate that through our advisory service of which we have approximately 70 dairy advisors around the country. It's to translate those research results and those good practice results through our advisors out onto farms.

**Laura Rice says:** We were going to discuss the building belief that good welfare practice enables cows to be more productive. Luigi, what are the main Care4Dairy recommendations to improve the reproductive performance for dairy heifers and prepare them for both pregnancy and calving?

**Luigi Iannetti responds:** The Care4Dairy guidelines and fact sheets describe for all life stages of dairy cows, including heifers, both good practices that are the minimum standards that should be achieved and, also best practices that is the optimal that should be encouraged. Concerning heifers, the main recommendations for farmers are, as good practice, to regularly monitor the body condition score that is a score that is assigned to animals according to their state of nutrition, it is a number. Then to assess the weight and average daily gain and this

should be done at least at some key stages of the life of the heifers. For example, after weaning and before breeding. If instead you consider best practice, so the best that you can achieve, all this information should be recorded for each heifer to allow that adjustments are made promptly. And this should be done not only at some key stages of the life of this heifer, but at all key stages. So, after weaning, at six to eight months of age, before breeding, at breeding, when pregnancy is confirmed, and before calving. These are the main recommendations from the Care4Dairy guidelines.

**Laura Rice asks:** Okay, and what practices are the best farms using to monitor body conditions and weights of heifers, Joe?

**Joe Patton answers:** Yes, I fully agree with Luigi, and that's certainly in the guidelines. It's something that has to be done. I think in an Irish context, the preference is for physical weighing. Generally it happens on farms in conjunction with some of the other management practices. For example, if there are other issues like vaccination or dosing, occurring, or maybe at housing, those are opportune times to match those in with the key stages as well. The physical weighing is the big one for most people. Obviously, weigh bands or using bands or using other physical guidelines are possible as well, but for most people, I think to build confidence in the weights, it's important that the physical weighing occurs and what it does, it helps to train practitioners or helps to train farmers eye as to what the correct weight looks like, because often we see that people either overestimate or significantly underestimate the weights for the stage of life and it can be difficult at times to convince people that what the correct weight is based on a visual appraisal. So, there is no substitute really, in the initial stages anyway, for actually physically weighing. But I suppose one addition to that that's important and has really begun to happen now with Apps and the capacity to manage the data. There isn't a huge benefit from weighing unless, as Luigi said, there is some action taken on the weights. Often we see weights are done and then weights are not acted upon. So with the capacity to track weights, with your phone obviously now, and for it to be in your pocket through some of the herd management apps, the weighing of stock becomes a very active practice and the actions taken on foot of the weighing are very important. And that's where people are beginning to move now, taking action based on the numbers and that's proven very beneficial, I think.

**Laura Rice says:** So optimizing general health through health planning is a key Care4Dairy recommendation. Luigi, what does the best practice look like in this regard?

**Luigi Iannetti answers:** Again, according to the Care4Dairy recommendations, best practice farms should have a written health and welfare plan in order to optimise general health, preventative health care. This plan should be drafted with the advice of a veterinarian and should include prophylactic health management and also a plan for triaging. This means that illness and injury should be classified on the basis of their severity and then treated on this basis, on this classification. So less severe or more severe, different treatment or not treated, if necessary. If it is enough, for example, to change some kind of management without a pharmacological treatment.

**Luigi Iannetti continues:** The plan should also be regularly reviewed and updated, at least each year, based on the data collected on farm. Regular checking for lameness is also really crucial in heifers. Mastitis instead is a little bit less crucial compared to cows. But lameness is particularly important. And best practice farms should check lameness every day, conduct a

regular gait scoring, so a scoring on a scale. The farmer can decide, but the usual scale can be one, two, three, according to the severity of the lameness. And all the information collected should be carefully recorded together with all the other morbidity data that are collected on the farm.

**Laura Rice asks:** And Joe is best practice in regards to health planning something that you see regularly used?

**Joe Patton answers:** I think it is, certainly in an Irish context, we could make progress in terms of having a defined written plan and a written protocol, on farms. These practices, evolve over time and in terms of experience and people begin to modify their practices and their behaviours on the basis of past experience. But, I agree that maybe to have more farms with defined written protocols would be beneficial. I suppose one thing in an Irish context, which is quite different, possibly from our colleagues in Europe, is that our system tends to be batch-based because we have a very condensed calving season. So therefore, our young stock tend to be very homogenous in age. Their groups tend to be quite similar in age. Our heifers would generally be in batches that are managed as a single group. So, stage of year, as well as stage of life become quite similar. For example, the question around parasite control happens at a batch level, rather than at an individual animal level, and management of weaning tends to happen at a batch level, rather than just at an individual level. So that lends itself to having better protocols written down, because these are annual events, rather than continuous events, and there is some scope for that, and it probably makes it easier in that context to manage animals.

**Joe Patton continues:** Certainly, like a lot of these things, lots of farmers have the wisdom in their head, and perhaps to share that with staff and having that wisdom on a page or on a chart on the wall where it can be seen and relevant would be something that we see it in other aspects for milking, for example, but we could certainly do more on the health side, the situation is relatively good, but that would improve it.

**Laura Rice asks:** In terms of heifer health, Joe, what changes have you observed to optimise heifer health and how do these changes come about?

**Joe Patton answers:** What we've seen in the context of the Irish industry over the last 10 years has been quite remarkable, actually, in terms of how it has been coincident with changes in the scale of the National Dairy Herd, because of expansion on dairy farms post milk quota. Just for overseas listeners, our average herd scale has gone from just under 60 cows up to closer to 90, 95 cows. So, at an owner operator scale, that has put significant pressure on systems, but it has also allowed us to maybe formalise or professionalise a little bit as well.

**Joe Patton continues:** So, the things that have made the biggest difference, I would say a focus on colostrum. Colostrum feeding and colostrum quality and that has been a real push. The simple 1, 2, 3 rule, which we've implemented on lots of farms, so, a first feed within 2 hours and 3 litres of high-quality colostrum that has been quite transformational. The other big changes, is that from a genetics perspective, we have really selected for health traits and fertility traits, so, the longevity and the health of the animals is improving. We also have better data on calving difficulty. So, farmers are very conscious now of using to reduce the issues around difficult calvings or dystocia, we are very conscious of selecting and the

industry does a good job on that, selecting sires that are suitable for use for heifers, which is important. I think those are the big changes: the calf rearing stage, the genetics and obviously the weighing is more common and more prominent than previously.

**Joe Patton continues:** So, there are a lot of positive things and I suppose, out of necessity of maybe managing more large scale and more numbers, a lot of those things have become more formalised. That has been quite a benefit, I would say. It's almost easier to manage when we have a bigger batch than having a stretched-out batch and that has proven beneficial.

**Laura Rice asks:** Luigi, reducing stress and encouraging positive behaviours are recommended in the Care4Dairy guidelines. Can you give us an example of how to achieve these goals?

**Luigi Iannetti explains:** The Care4Dairy recommendations also give a number of suggestions, practical examples also, in order to achieve best practices for reducing stress and encouraging positive behaviours.

**Luigi Iannetti continues:** For example, increasing opportunities of positive human animal relationships. It is particularly important at this stage, the age of the heifers, as the positive relations between the farm handlers and the heifer will shape the behaviour of these animals for their whole life. This is also important when these animals are calves, but still important when they are heifers.

**Luigi Iannetti continues:** And this may include the calm and gentle handling, for example, touching, petting, or just quietly talking. Moreover, different types of environmental enrichments can be useful for this purpose. And they should be used in best practice farms to encourage a range of healthy behaviours which will promote good health and good welfare. What are these enrichments? They can be olfactory, visual, tactile, social. There are still many studies relating to this. But we can give some examples. For example, brushes. Brushes are the most common tactile enrichment, their use also gives heifers the possibility of socialisation with other heifers or cows. Giving them access to an exercise area, even an indoor exercise area if grazing is not possible, for example, during winter. Or also soft and clean bedding, such as straw in good quantity, a sensory or cognitive enrichment, such as certain types of toys, or even smell, the lavender smell has been found to be good for these animals.

**Luigi Iannetti continues:** Even classical music has been used as an auditory enrichment with good results more for cows during milking, but for heifers it could have the same good effect. All these enrichments should however be well maintained and regularly renewed to add complexity and novelty to the environment.

**Laura Rice says:** So, reducing their stress is incredibly important by the sound of it and encouraging positive behaviours. Joe, do you think that these are achievable goals for farmers and what advice would help farmers to improve these aspects of their heifer care?

**Joe Patton answers:** They are very achievable and I think there's a good understanding, among most dairy farmers, at least, that the objectives that we're trying to achieve here are very important. There is, I think, an intuitive knowledge of that. The challenge or the issue is to present some options to farmers, and in a very engaging way.

**Joe Patton continues:** For example, Luigi, you mentioned classical music. I'm afraid Irish cows are inflicted with country music, which may not be so good for milk production. Look, we can have those discussions without it being seeming that it's an imposition on farmers where- farmers love their animals, so they want to do their best for them. We just give some solid suggestions like that, and I think the environment is enriched as a result. I think most people want to do better, as long as we offer some realistic suggestions and some realistic and verifiable options for people, people will take from that menu and implement. You can see that on farms, that the ambition is there. Just perhaps the imagination needs to be encouraged.

**Laura Rice says:** That's really great advice. So, to recap, a heifer's body condition is best done through regular weighing, body condition scoring measurements and recording these measures, using preventative healthcare, checking for lameness, optimising a heifer's general health and reducing stress and encouraging positive behaviours are necessary for cows to be more productive.

Is there anything either of you would like to add to this?

**Luigi Iannetti responds:** The Care4Dairy recommendations give general indications, then it's also up to the farmer to decide, for example, what kind of enrichment to use, also on the basis of the actual condition in their country, in their situation.

**Joe Patton says:** Yes, that's important. The overview is there. The recommendations are there and they are independent of scale or independent of circumstance, independent of the system of production, but there are options for everybody within those contexts. And it's to find the right balance and the right choices for the individual circumstance and that can be done. One other final point, I think it's something we probably could focus more on. We have a very good network of discussion groups. We have thousands of farmers who participate in discussion groups, so among peer groups and possibly the training of advisors to introduce this possibility of these topics to discussion groups, even at conferences, et cetera. We all find our information at technical conferences, for example, these things should be included at those points because I think when you include it as part of an overall package of health, welfare and production, it becomes more embedded then rather than sitting as something separate. It becomes something that's central to the discussion around the overall performance of the farm rather than something to be added at the end.

**Laura Rice summarises:** It has to be included in all the conversations. We've run out of time. Thank you to my guests, Dr. Joe Patton from Teagasc and Dr. Luigi Iannetti from the Care4Dairy Consortium.

**Laura Rice continues:** Thank you for listening. For more information, visit the Care4Dairy website, [www.care4dairy.eu](http://www.care4dairy.eu), where you can find more information on this podcast topic, the other podcast in the series, best practice guides and fact sheets on the welfare of dairy, calves, heifers, cows, and end of career animals. My name is Laura Rice.

Thank you for listening.