

“In light of the changes facing the UK dairy industry what steps should be taken at farm level to adapt to these changes and boldly go forward?”

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What does Boldly Go mean? To discover new and uncharted territories or something no one has done before. This is certainly very apt when faced with Covid-19 and the ‘new normal’ which we all may have to come accustomed to. The last six months have brought enormous upheaval across the globe and shown the weakness of supply chains and globalisation. This may be further compounded within the next few months with the looming threat of a No-Deal Brexit. In order to boldly go into the future, I believe there are a few key areas for dairy farmers to focus on in order to maximise efficiency, sustainability and importantly profitability.

The first key area where this can be achieved is through genetic advancement, what is the cow of the future? The last 10 years has shown exponential acceleration in the genetic merit of our cows, using both genomic selection and an increase in selection intensity across farms via a much higher use of beef semen across genetically inferior animals. We need to be breeding a cow which produces more, eats less and requires less labour. We are beginning to see early indexes for feed efficiency and selection for animals with lower maintenance requirements, this will aim to reduce wasted feed and resources. Using genomic testing for females we can find the outliers within populations to breed the next generation from, these will be animals with high production and high efficiency. If we can drive this selection intensity across herds this will also improve the sustainability of farms and improve the profitability. The other key area for genetic advancement aside from production and efficiency is that of improving health and fitness traits of our herds. I am a believer of the 80-20 rule whereby we spend 80% of our time working with 20% of our cows. Whether this is fertility treatments, lameness or mastitis it is costly in both time and money, in a future where skilled labour may become in short supply, we will need cows that require as little human intervention as possible. From looking at genetic audits of our own herd at Bentleyford I have seen how for every extra point of fertility index we are gaining a day on calving interval, which again leads to more sustainable feed efficient cows by reducing average days in milk and cull rates. A further area I believe should be focussed on is the breeding for higher component milk especially if farmers are supplying manufacturers rather than liquid milk processors, fat % is one the highest heritability traits therefore changes can be seen within short generation intervals and this will lead to much higher value milk and less costs to the dairy transporting water away from farms.

The second key area I believe should be focussed on is the environment and the impact farming has on it. We are beginning to see Defra and the government looking to focus on this area, Arla are aiming for net zero CO₂ by 2050 and in addition to this the NFU have set an aim for net zero by 2040. According to FAO, global livestock production accounts for 18% of greenhouse gasses and dairy for 3%. Although this seems a relatively small number the aim must be on reducing this and contributing as are all other industries. This can be done through a variety of measures, however the key area to focus will be on the efficiency of our cows and what we feed them. Supermarkets such as Co-op have set the target to farms to remove soya from diets by 2025 which has a significantly higher carbon footprint than feed produced in the British Isles. Farmers must look to produce more home grown proteins and the use of feedstuffs such as Novapro which is a UK produced protein, this is going to be more of an area for going back to the future with a focus on milk from forage and maximising usage of available land.

However, reducing carbon emissions from feed usage are not the only environmental area we must focus on, it is believed that clean air regulations will be brought in in the near future, this falls into

line with reductions in CO2 as farms will need to make more efficient use of nitrogen. An example of this would be to inject slurry into the ground for growing crops rather than the use of splash plates which causes nitrogen to both be wasted and the air pollution associated with it. A further way to offset this would be the use of bio-digesters to capture the methane from slurry and use it to produce electricity which would create a double win situation. As many will know, dairy farms are high users of electricity therefore and renewable sources that can be used will add huge cost savings. For example, the use of heat exchangers to capture heat from milk to heat water will also provide huge benefits in both cost and time.

Thirdly technology should be the next area to focus on and grasp going boldly into the future, it is such a rapidly changing and developing area it is difficult to know what parts to focus on. But with the shortage of skilled workers the dairy industry may have to deal with and possible disruptions to the number of foreign nationals available to work on farms any labour-saving device must be taken seriously.

In the last six months we have seen national lockdowns and people become used to working remotely, therefore why should we not do the same with our cows? The technology from heat, activity and rumination monitors can allow for animals to be checked from anywhere with internet connection. I must admit I do like to keep an eye on things even when in a different country. The key is learning to trust the technology. This allows for remote working and can possibly identify problems before they are visible by the human eye. When scaling this up and allowing experts to view this data on a larger scale trends could be seen for a variety of reasons. Farmers could use this to see how slight changes in anything effect performance and pinpoint how problems can be rectified. For example, you now have products such as InTouch from Keenan which monitors the mix which is fed to the cows and is recorded via the cloud and can show when problems occur or human error may be involved.

Or when talking about the availability of labour is the advancement of robotic milking. From 10 years ago the uptake has risen dramatically across the UK, with some of the highest producing herds now being milked through robots, this has allowed for more time to be spent removing production bottlenecks and allowing cows to express their natural behaviour. Not only are we seeing robotic milking but also robotic feeding, feed pushers and even manure scrapers. All of these aim to improve the cleanliness, health and performance of the herds.

Therefore, I believe we should take the decision making about our futures into our own hands and boldly go focussing on genetics, sustainability and technology. The aim of this must be to set trends rather than wait for regulations be brought in for us to follow i.e. for environmental reasons or for reduction in soya usage. As such being proactive rather than reactive, the early adopters will see the most benefits and when looking into sustainability many of the areas to focus on also constitute to good practice.

Furthermore, when looking to the possible risks associated with Brexit and Covid-19 we have seen how fragile supply chains have been over the last six months, with many shortages of products, which is a risk of being an island nation. As such it will be good sense to make business as sustainable as possible and less reliant on imports or by-products of manufacturing industries, for example many feedstuffs from brewery products have become in short supply as have bedding products, resulting in rapid diet changes for many herds. This also includes the use of farms own produced electric again reducing the reliance on others. However, this focus will not be a one size fits all approach, we must find what suits each farmer and business and what is both affordable and achievable, all of which depends on a sustainable milk price.