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Efficient and Sustainable Expansion for Irish Dairy Farming

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Introduction

Expansion of milk production will take place in this country after quotas are abolished in 2015. We are all now familiar with the Food Harvest 2020 Report which claims 50% expansion is achievable. My study aims to investigate how this expansion can be achieved in an efficient and sustainable manner. It also explores how farmers in other countries and in other sectors have expanded their business and managed this expansion. What are the main roadblocks for Irish Dairy farmers trying to achieve scale and what do we need to do to overcome these obstacles.

Study Tour

United States

On my travels I first visited The US to see a variety of Dairy Farming systems from a 10,000 cow fully indoor unit in Nebraska to a 200 cow grazing farm in Wisconsin. The biggest dairy that we visited had 17 miles of Irrigation Pipelines to take effluent away from the farm to irrigate on 7,000 acres of surrounding farmland. The farmland grows Maize silage for the dairy which only owns the 70 acres on which the dairy is built. Supply contracts are set up in advance for the Maize Silage and where possible milk is forward sold to lock in a margin which is essential with the scale of the business. Expansion is achieved through developing strong business relationships with landowners.

New Zealand

New Zealand in the winter again showed a country with great interaction between Tillage and Dairy Farmers. Cows were being wintered on crops on a huge scale. I visited a large farming business in the Waikato milking 10,000 cows in over 20 separate farms. It's a large corporate farm with an operations manager, a financial controller and a Board of Directors. Share milkers and farm managers report to a central farm office. It is a very disciplined business with great attention to detail.

South Africa

South Africa is a country with huge social problems but also huge opportunity and immense scale. A small number of grassland farmers run profitable large scale Dairy Farms. Innovation was the point of difference in this country. Low skilled staff meant that data collection, heat detection and cow drafting was all automated with one unit even weighing cows daily as they left the parlour and testing new milk meters that measured individual cows' Fat and Protein % during milking. In general these farms were feeding 2 tonnes of concentrate per cow to supplement large volumes of low quality Kikuyu grass.

United Kingdom

I also spent some time in the UK with large scale grassland farmers. Once-a-day milking is being successfully practised on a number of larger units. Some are also feeding up to a ton of concentrate per cow with high stocking rates. With expansion unrestricted by milk quotas, efficient grass-based producers have grown their businesses very rapidly over the last 10 years. They are now in a period of consolidation as finance has become more restrictive.

Observations

- Access to land and opportunities to expand were important to all farmers
- Farming is a capital hungry business and this is often the biggest impediment to growth
- There are environmental concerns with Agriculture across the Globe
- Successful farmers build strong business relationships to allow them to grow their business
- As a business grows, more opportunities are created internally for staff progression
- Bigger herds need more automation

Irish Challenges

- Small land parcels are a huge challenge for Irish Dairy farmers wishing to expand
- Historical attachment to farms prevent mobility
- Single Farm Payment protects inefficient farm practices
- Environmental restrictions increase cost of infrastructure
- Very slow progress and little innovation with plant breeding

Conclusions

We have the most sustainable dairy industry in the World and as we expand that industry we need to maintain that advantage over our competitors. As we push stocking rates on our milking platforms we need to ensure that we don't build in inefficiencies or pose too much of a risk to the environment. When we sell a product to a customer they take ownership of that product and its production cycle whether it's a litre of milk or a tonne of milk powder. They demand a sustainable product across all social, economic and environmental measurements.

If we push the boundaries of stocking rates on our milking platforms we will need to import feed onto the dairy unit. Zero grazing in fresh grass from small fragmented blocks of ground is a real option that could allow dairy farmers to do this sustainably and efficiently. The cost of zero grazed grass is only slightly above the cost of grazed grass when the depreciation of grazing infrastructure is taken into account. This could be done as a means to temporarily push cow numbers while waiting for opportunities on a bigger grazing platform for example. It could also be used as a method of achieving real scale where grass is contracted in and slurry is contracted out with a dairy farmer concentrating on milking and feeding cows and a tillage farmer could grow and supply grass.

GM grass may be another method for achieving more sustainability and efficiency. The possibilities are endless. Already there is a grass being trialled in Australia that reduces Methane Emissions from

grazed grass by 40%. For Ireland, a country that hopes to expand its national herd by 40% the benefits are obvious. Other traits that may become possible are Round-up Ready, Nitrogen Fixing and drought resistant Grasses. All would create huge efficiency and Sustainability gains for Irish Dairy farmers. We can't afford to ignore the benefits of GM Grass and Crops any longer.

We should make the best possible use of Renewable energy without affecting the cash-flow of our businesses. The best renewable investments are self-financing and have a short to medium term payback with a long-term lifespan. If the energy created can be used on-site the payback is much faster. Renewables can also make better use of waste products from agriculture such as Slurry in Anaerobic Digesters. Irish Dairy Farmers should have access to Energy Audits which would give direction on which renewable areas to invest in on individual farms.

When I applied for a Nuffield Scholarship in 2009, I'd have to admit that I didn't fully understand the opportunity that Nuffield Ireland was offering. A €10,000 Travel bursary was reason enough for me to put my name in the hat. Any opportunity to travel and study dairy farming was one not to be missed but this opportunity hugely exceeded any of my expectations. The whole Process, the People and the Learning Experiences that I enjoyed have been enlightening to say the least. Nuffield gives a great education on all aspects of Global Agriculture. I've made some great friends along the way and met some inspiring people. Hopefully I can put some of what I've learned into practice over the coming years as we expand the home business and increase dairy production. Thanks very sincerely to my Family for their support during my travels, to Nuffield Ireland for the opportunity and most of all to my sponsor, FBD Trust for making it possible.

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