

## Pasture Summit Speech

Michael Murphy 2018

It is a great pleasure to welcome this conference.

“The Pasture Summit” is a very welcome development. In Ireland we have long admired both the skills of the “All Blacks” at rugby and also the low cost skills of both your sheep and dairy farmers.

New Zealand and Ireland are unique in having to be highly competitive in world markets as both countries export +90% of their milk products. Our sole competitive advantage for both is an abundant supply of low cost energy and protein, ie our grass.

In the past Ireland has learned hugely from NZ. But with excellent Irish research now at Moorepark we believe future knowledge sharing will be very much a two way process.

It’s wonderful to say that currently high quality NZ or Irish dairy operations are very competitive on the world stage, whether from a cost, environmental footprint or animal welfare perspective.

Demand for milk products is rising steadily as world population grows to an estimated 9.4bl in 2050, and 3<sup>rd</sup> world countries consume more milk products as incomes rise.

But there are real challenges.

Grain fed milk production (often confinement) produces perhaps 80% + of world milk. Increase in maize grain yields are phenomenal, eg. From 30 bushels/acre in USA in 1900 to 175 bushels/acre in 2017. Driven by a research pot of an estimated 7.5bl NZ\$/year. Yields are doubling every 25 – 30 years.

In contrast, NZ and Ireland only produce 4.2% of world milk. Productivity of our non GMO grasses is only growing by possibly 0.2%/year, doubling production every 360 years.

Resources to drive productivity in the pastoral dairy world are only a tiny fraction of those available to our maize driven competitors. Hence the birth of this conference.

To stay competitive over the coming decades NZ and Ireland need to cooperate closely to increase the rate of innovation relevant to our pastoral systems. We need to build a spirit of trust and cooperation where our best farmers, researchers and extension people can meet regularly to exchange ideas and spark enhanced creativity in our sector.

NZ and Ireland will always compete in the market place. But it is enlightened self interest for both of us to cooperate closely in driving farm efficiencies. We wont be profitable on farm if we fail to stay more competitive than the grain based dairy industries worldwide.

### **Further Challenges - Internal**

Wrong focus on farm; a focus on cow production rather than profit.

Three examples.

(a) In Ireland second hand US genetics became available in 1988, through Holland genetics. Higher yield per cow potential led to a huge take up via AB. For 7 or 8 years this continued.

Result; fertility in the Irish herd was hammered. Profits dropped hugely.

The Irish cows entering the national herd in 2021 are estimated to be back to the fertility levels of the national herd in 1988.

Thirty three wasted years resulting from a focus on production rather than profits.

(b) In NZ from 2000 -2006 average FWE (Farm Working Expenses) were around \$ 2.50/kg MS.

In 2007/2008 milk price reached a record \$7 kg/MS.

Farmers responded by increasing FWE by more than 40% with extra feed being the biggest component. Higher feed costs have remained and coupled with

increased intensification on many farms have led to much higher costs, much higher debt and longer working hours.

Moral: real sustainability on farm has to be profit driven. In Ireland Moorepark have explained 44% of variation between farms in profit per hectare is based on cost. There is an even stronger correlation in New Zealand, averaging 55%. By contrast, Moorepark found only 5% of variation in profit is based on production/cow. New Zealand research found a higher figure of 17% but this dropped to 0% in low milk price years. This also contrasts with about one third of the variation in profit per hectare being based on milksolids production per hectare.

(c) Reluctance of young people to enter farming.

NZ has relied on overseas labour for many years. In Ireland since expansion started in 2015 (end of quotas) it is very obvious that lack of young people entering the industry is our biggest constraint.

Problem; dairying is seen as having very “unsocial” hours in both countries.

### **External Challenges**

(A) Appropriate regulation.

The world is warming. Unquestionably. Regulation to counter this are inevitable. But are the chosen metrics correct?

Let's look at emissions.

(1) Methane emissions have a life of 12 years. Yet are treated as permanently in the atmosphere. Appropriate? Hardly.

(2) Carbon footprint? The high organic matter soils of NZ and Ireland are a natural “carbon soak”. Typically pastoral soils with high organic matter contain something like 250 – 300 tonnes more of animal manure/ha than the low O.M. soils so typical of much of the rest of the world (tillage soils etc.)

The valid question is why this carbon sequestration is not fully recognised.

(3) We have a small number of oil producing countries. The environmental impact of this oil is linked with the countries who import this oil. NZ and

Ireland are unique in exporting most of their milk, beef etc. Yet food production effects are linked to the food producing countries – rather than the importing countries.

Is the different treatment of food and oil reasonable and equitable? Hardly.

It is obvious that NZ and Ireland have not stepped up to frame the narrative on the impact of pastoral systems on climate change. This will cost both countries dearly if not strongly addressed by NZ and Irish governments.

(B) Challenge from non milk “milks”

Non Dairy milks eg soya, rice, almond, coconut and pea milk now represent 3% of all “milk” solids sold and 12% of fluid “milk” sold worldwide.

Plant based milks are now real competition to animal based milk.

Plant based “milks” are inferior products nutritionally and healthwise to real milk. Cow’s milk has a great story to tell consumers but, realistically we are not winning the war. We can do better.

(C) Volatility of milk price has been a particular feature of the last 10 years. Almost certain to continue. It is a particular challenge to high cost producers.

(D) High debt. Bank borrowings of +NZ\$41bl. (ie 3.5ml NZ\$/farm) are a real problem. From an outside perspective it seems highly unlikely that the strong capital gains enjoyed by Kiwi dairy farms from approximately 1991 - 2015 are likely to continue, especially as banks now look for loans to be amortised.

So much for some of the challenges. It’s more fun to look at the opportunities open to us. There are many.

### **Opportunities.**

Looking at the practices of many of the best pastoral farmers worldwide and years of research results in New Zealand and Ireland; these suggest the following principles are key to high profitability pastoral farming.

We need a clear focus on low cost production ie grass to cash at low cost.

Be very good at the well established basics namely;

Grow high tonnes of grass. Fertiliser/drainage/pasture species.

High utilisation. Correct stocking rates and relentless focus on correct residuals.

Both Moorepark and DairyNZ have shown that every extra tonne of grass/ha eaten is worth an extra NZ\$300 - \$320, eg Increasing from 12 to 16 tonnes/ha eaten on a 200ha dairy farm is worth approximately NZ\$240,000 extra profit every year.

In Ireland we target 75% -78% of what the cow eats for the year as grazed grass to optimise profits. In NZ this figure may be higher.

Grass being utilised by high genetic merit cows calving in a condensed period so as to match supply and demand.

+90% cows in calf (excluding heifers) in 6 weeks. Moorepark calculates that each 1% increase in cows calved @ 6 weeks = \$15 per cow in herd.

Good longevity. 5 - 5.5 lactations/cow, driven by very fertile cows.

X bred cows for better longevity + more efficient converters of feed to milk than Friesian/Holsteins

Worth noting that in recent years a Moorepark substation at Clonakilty has demonstrated that X breeds on grass clover swards will give 1.03 kgs MS per 1kg body weight versus Holstein/Friesians on grass only swards which produce at 0.81 kgs MS per 1kg body weight. Same stocking rates and same inputs/cow. This led to increases in profit/ha of +30% at a high milk price, and +98% increased profits at a low milk price.

Replicate a simple system onto another unit, never intensify.

Why not intensify? In Ireland every 10% increase in bought in feeds dropped profits by NZ\$170/ ha. (Shalloo).

In NZ for every \$1 spent on supplements operating expenses increased by \$1.64 in Waikato; and by \$1.77 in Canterbury.

Moral; Working harder to make less profit is the definition of a "busy fool".

Low cost driven by grass rich systems will give high free cash/ha.

When expanding target a margin of safety of a ROA (return on asset) of +3 to 5% over the likely average cost of debt.

Two other essentials for continuing success will be:

- (1) a great culture where employees really “buy in” .
- (2) Strong financial controls re “making the budget”.

(C) Applying new technologies.

It is not widely realised that nowadays the main competitors to USA in the technology field are the three “I”s Israel, India and Ireland.

If grass based dairy farmers can clarify what their biggest constraints/problems are, then technology will solve the problems.

To me, the biggest opportunity in this area was identified by the late great Professor Colin Holmes.

In 1918 herd production dropped by 50% when changed to OAD (once a day) milking. In 2018 this drop is now only about 18% despite little selection for suitable genetics for OAD.

I believe that this 18% drop could be hugely reduced in a relatively short time span (10 - 20 years) of intensive selection.

OAD herds of the future who only drop by 5 -8% versus TAD makes it a “no brainer” to go OAD. Dairying would suddenly be socially/economically a very attractive career for new young blood in Ireland /NZ.

It is not a technology which would appeal to “confinement” dairying. But I believe it would transform grass based farming.

(D) Milk is a wonderful food. It contains 10 ingredients essential for humans +22 other ingredients which probably have many “health benefits” not yet understood.

It is the only food which on its own sustains and nurtures human life.

We have a wonderful story to tell. But to date this story has not been well told. In recent years sales of processed foods worldwide have been in decline as consumers better understand the negative health effects of high sugars and high salt.

In contrast, health benefits of milk eg high CLA's (conjugated linoleic acids) + a highly favourable ratio of Omega 3 to Omega 6 oils present in milk produced from grass are little known.

Incidence of obesity and type two diabetes is really rising at an alarming rate. Grass fed milk has a highly favourable ratio of 2.3 times Omega 6 to Omega 3. This will play a major part in combating obesity and diabetes.

In contrast grain/confinement milk has an Omega 6 to Omega 3 ratio of 5.8 which is of far lower health benefits.

Add in the strong environmental benefits of pastoral dairying versus confinement systems coupled with strong health benefits, eg 4.5 - 5.5 lactations in grazing systems compared to 2.5 lactations associated with confinement dairies and it is clear that we have a great story to tell.

It is a huge opportunity, and challenge to get much stronger market returns for a very much superior product. We need to aim higher than just securing "commodity returns" for a super product. I accept that this may be easier for Ireland than for NZ given our proximity to large consumer markets.

I believe that with a very clear focus NZ and Irish dairy farmers have an excellent future. I hope the Pasture Summit Conference will make a major contribution to this.