Ballyhaise Dairy Research

Grazing and Breeding to secure a better future

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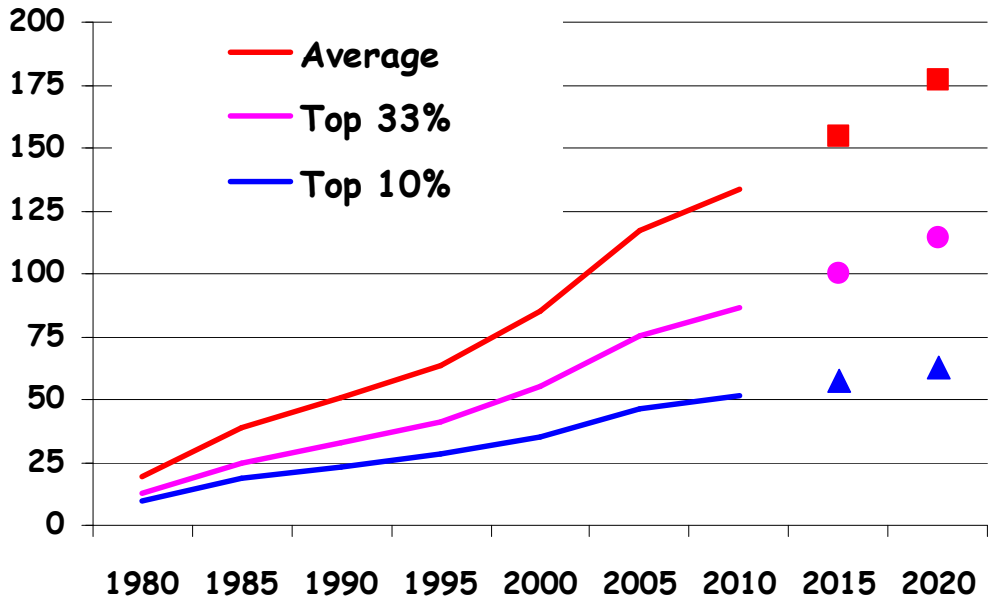
Everyone thinks of changing the world, but no one thinks of changing himself.

Leo Tolstoy

Introduction

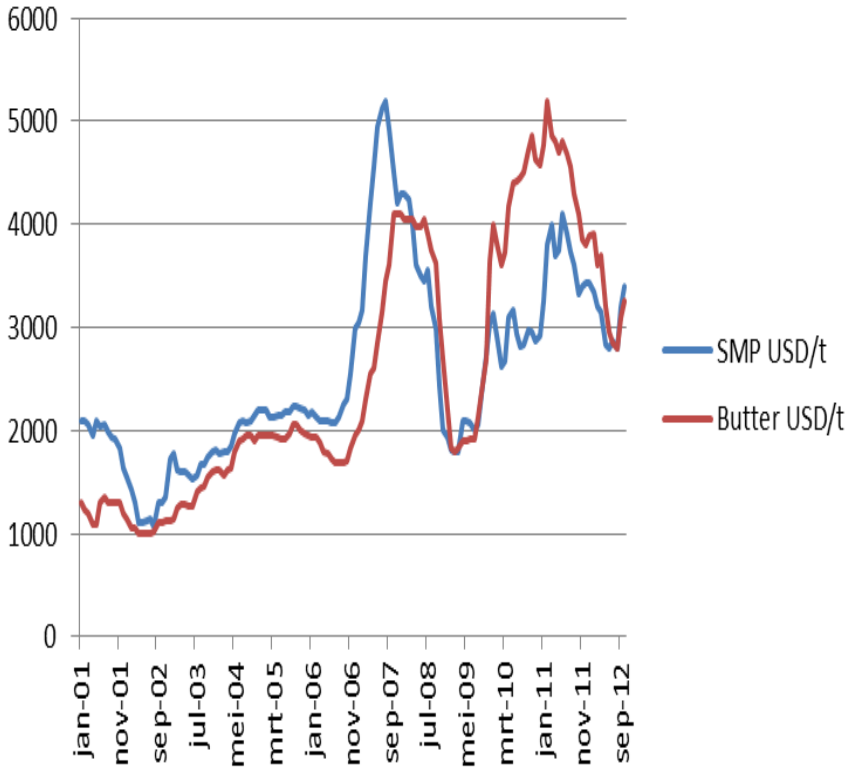
- What does the future hold for our dairy industry?
- What are the main limiting factors for Farmers in this region?
- How can we change our systems to thrive in our new environment?

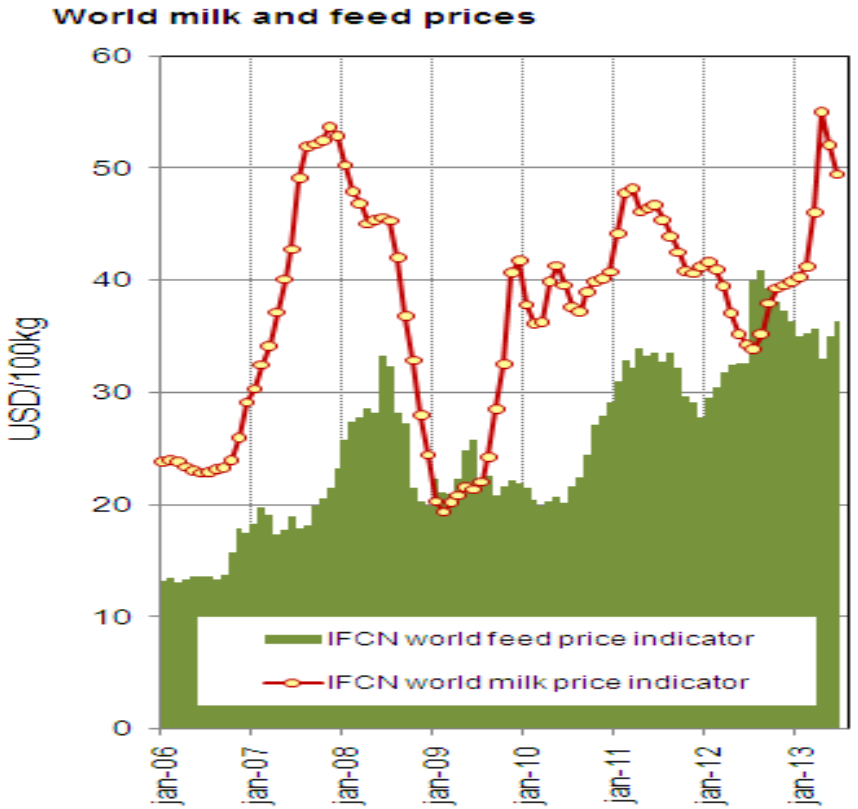
Cows required to earn an average wage?



- Does not mean smaller farms are more efficient.
- The most efficient farms tend to be larger.
- If you wish to expand which comes first??

Our New Production Environment





How can we compete on the world market??

Grass

Soil fertility

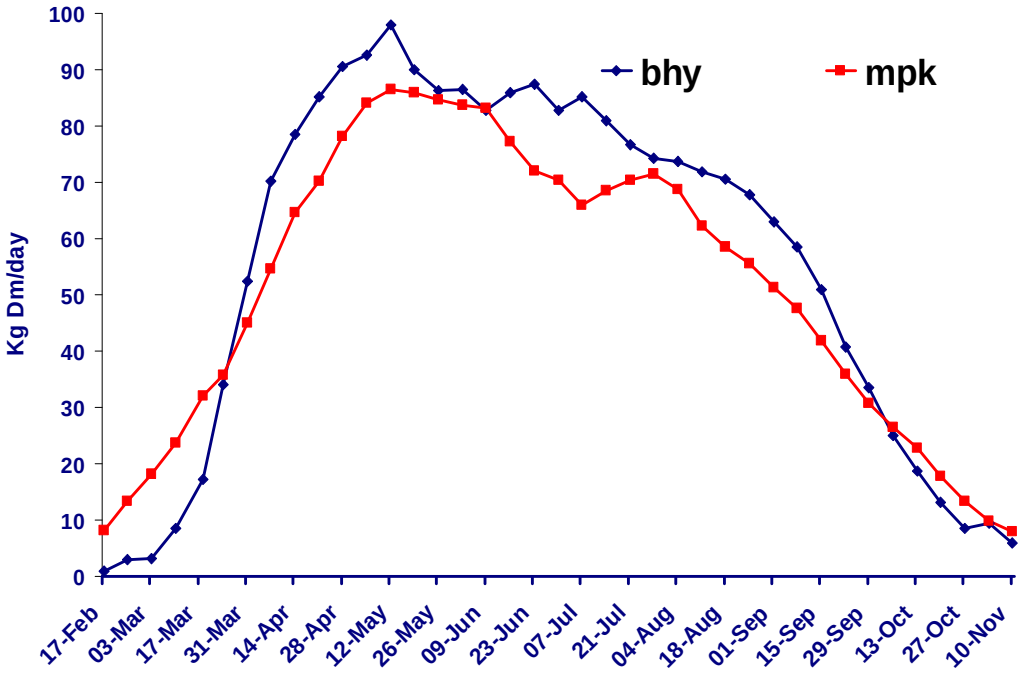
Reseeding

Infrastructure

Management

Grass growing potential

- Shorter growing season
- Higher peak growth



Matching feed demand to growth pattern -

- ➢ Delayed calving (mean calving 5th March)
- ➢ High stocking rate to increase mid-season utilisation
- ➢ Early culling of empty cows (1st of November)

Appropriate Stocking Rate

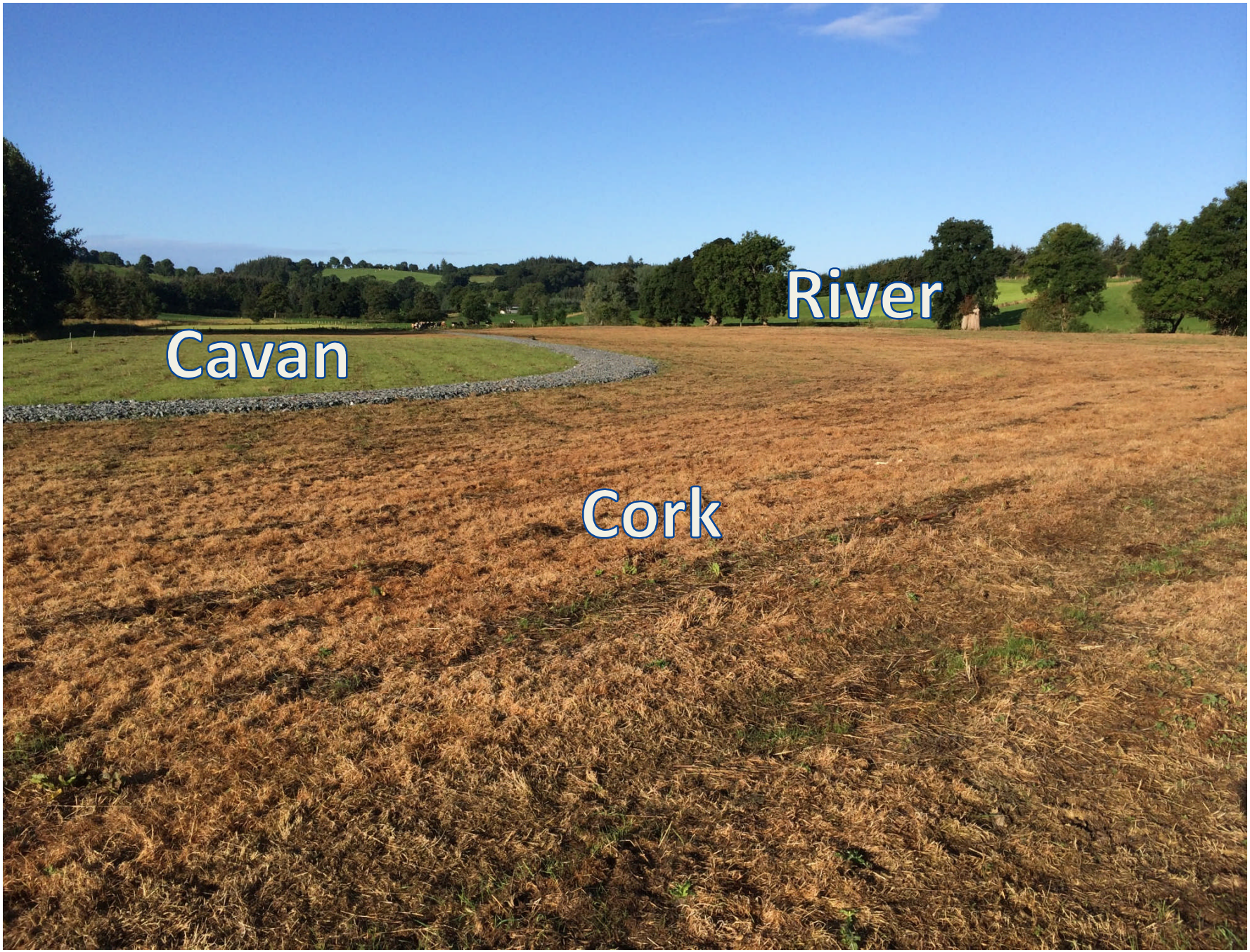
	Pasture grown, t			
Supplements / cow (kg)	10	12	14	16
0.50	1.8	2.2	2.5	3.0
1.00	2.0	2.4	2.9	3.2

*All of these stocking rates equate to 85 kg live weight/t feed DM available.

- How many cows can I carry?
- Feed shortages happen at low stocking rates.
- Increasing cow numbers ahead of grass production?

Take Action

- Paddock Audit – soil fert, access, water, species, weeds ….
- List work to be completed and costs
- Prioritise
- Work plan – time lines
- Cash or Borrow??
- Invest in your own skills – time not money


River
Cavan
Cork

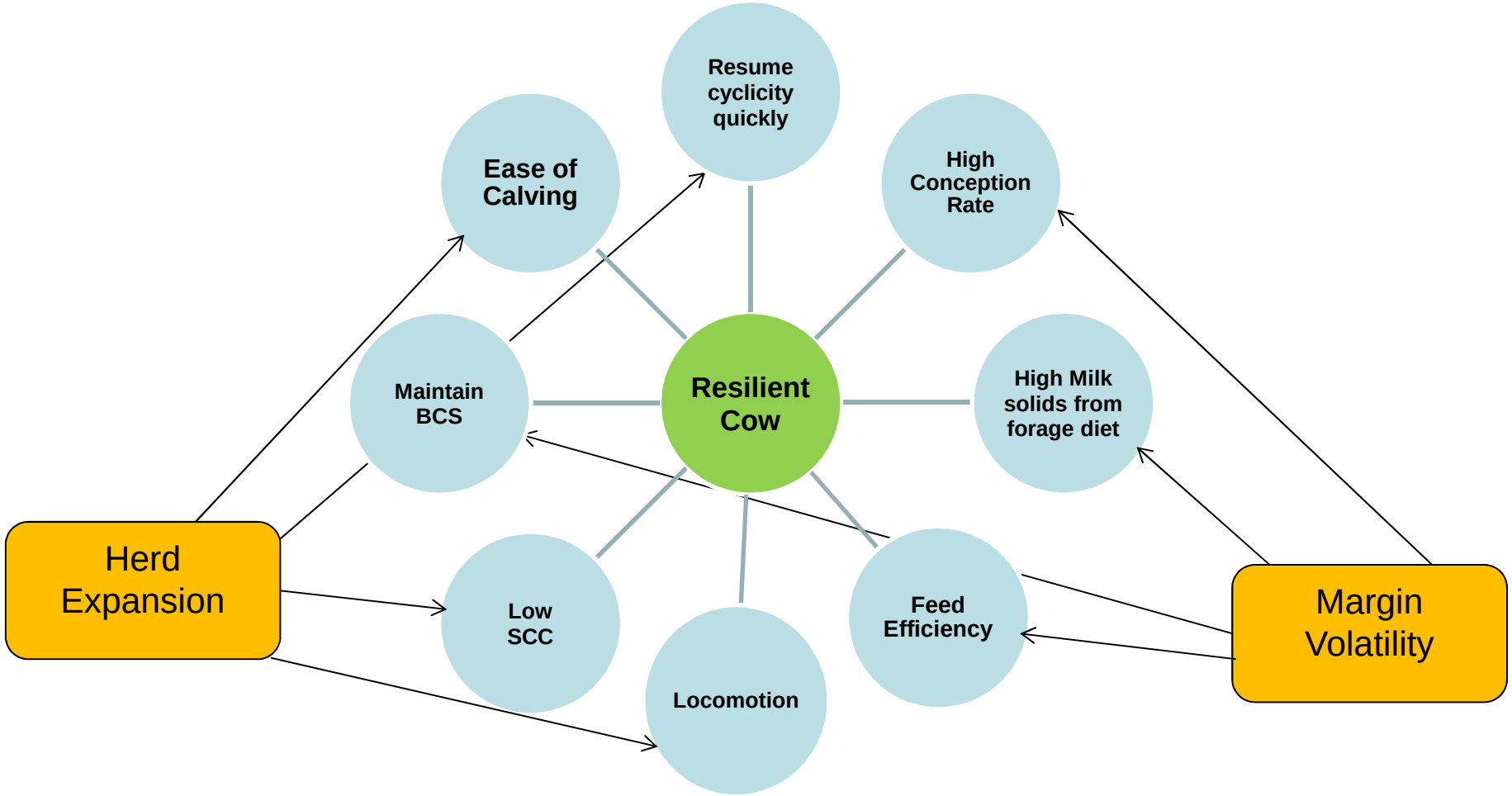
Cow

Milk solids Production

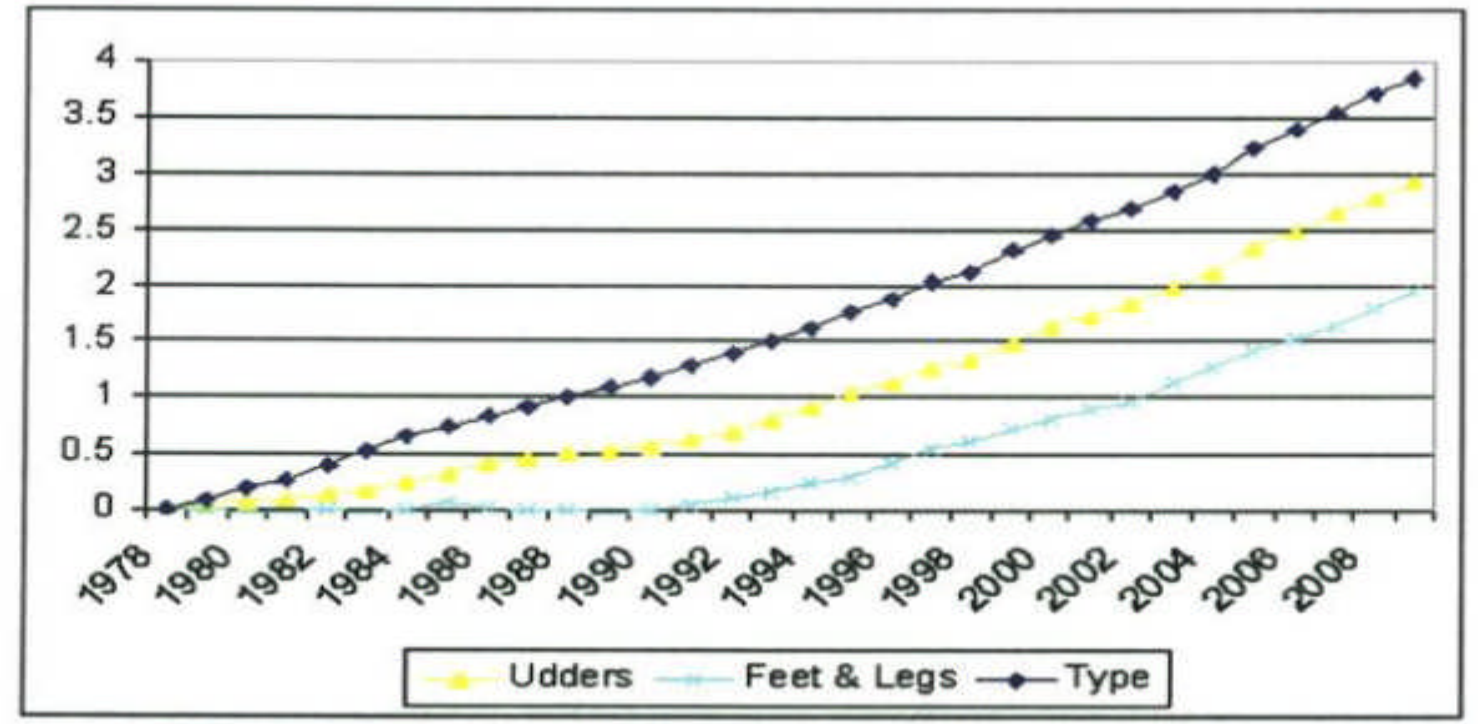
Fertility

Functional traits

Wanted – Functional cow



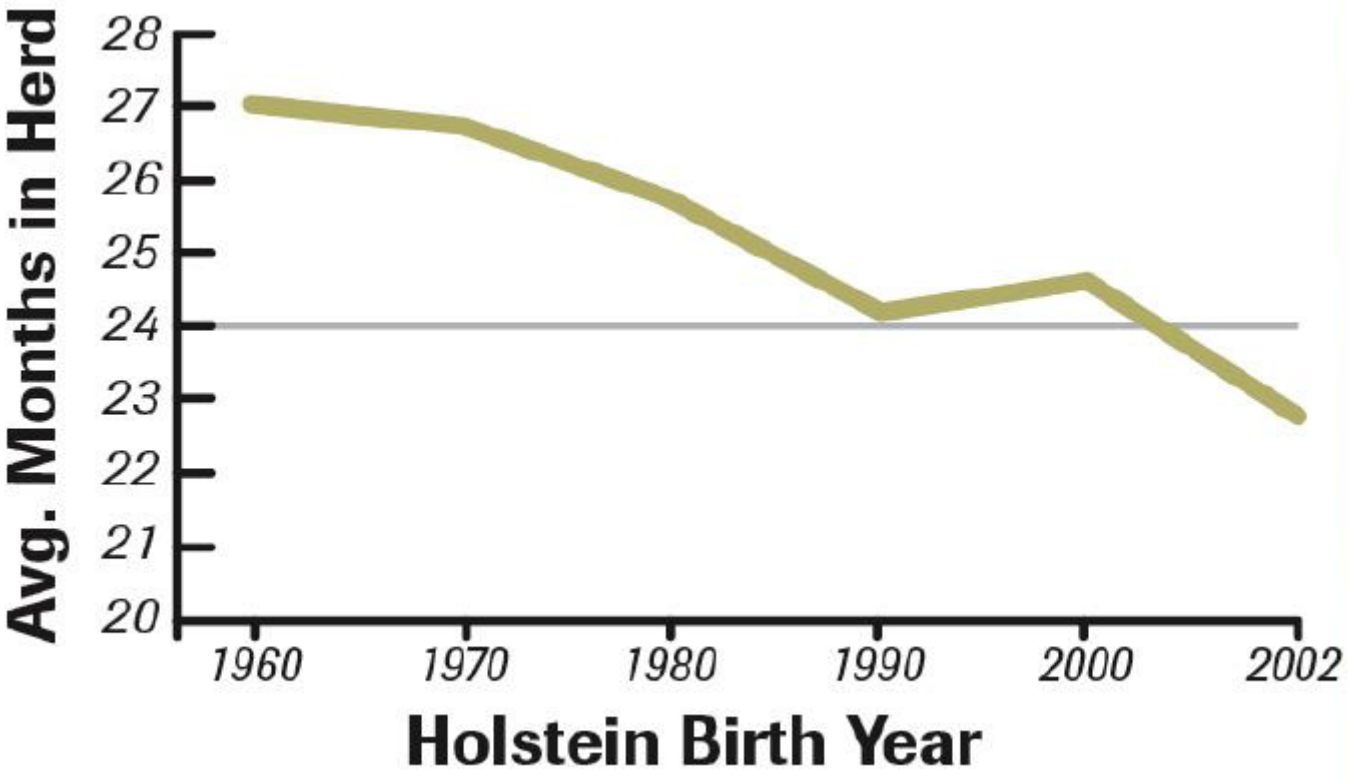
Selection for type traits USA



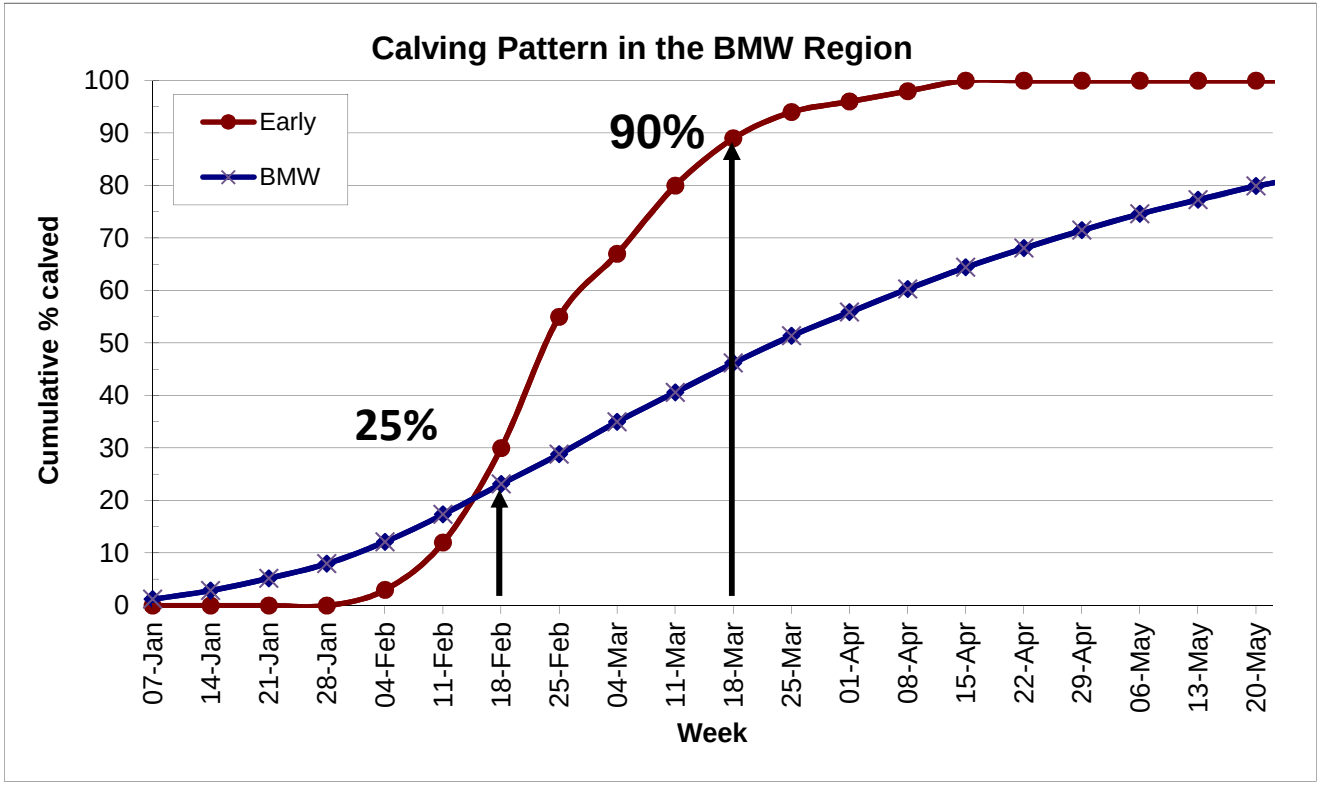
Source : Dr. T. Lawlor Holstein Association

- Improvements in udder conformation.
- Not based on hard data.

Decline in Survival



Calving Pattern



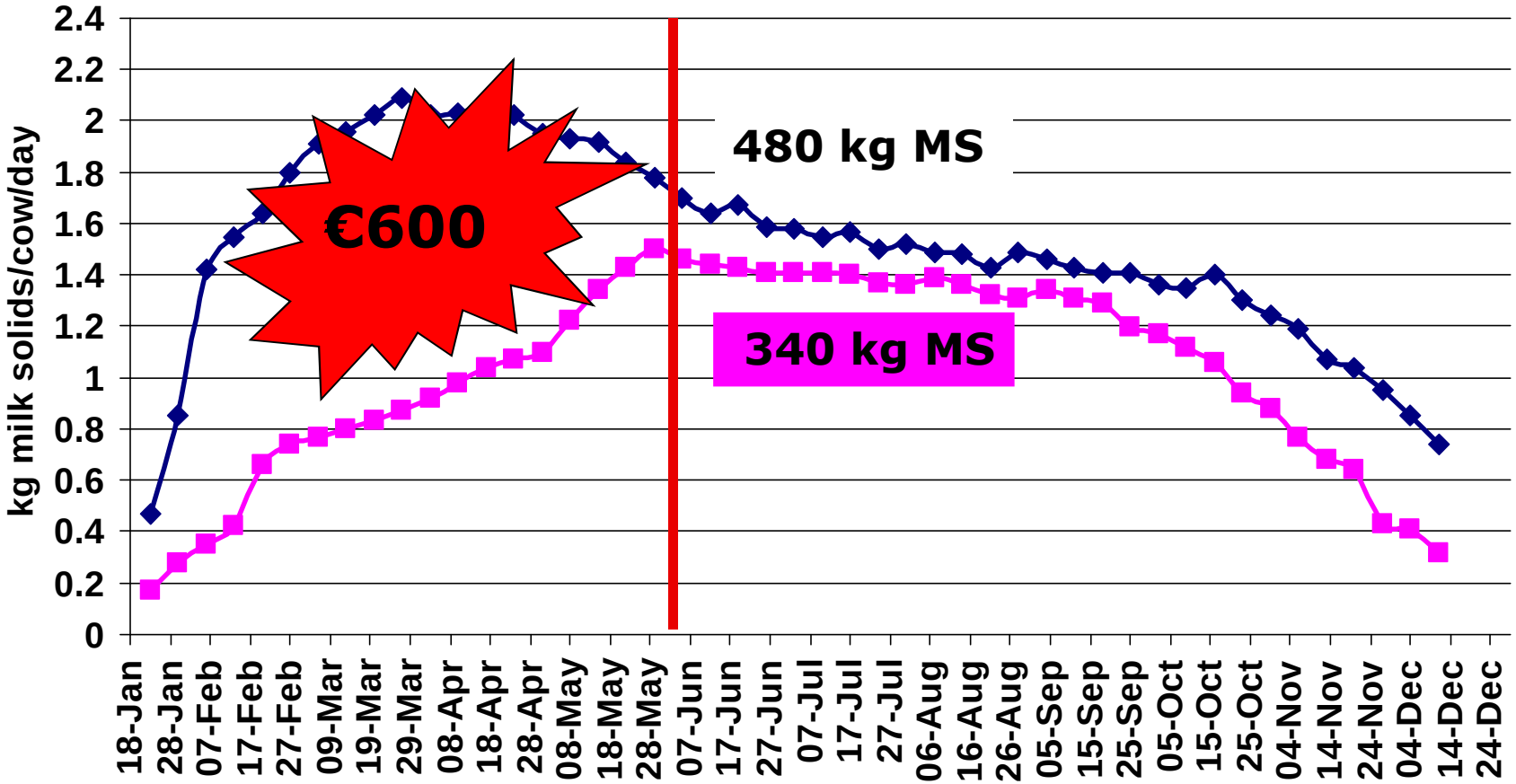
- Massive production losses
- 15 AI heifers per 100 cows!!!

Are we keeping the cows because we don't have heifers

Or

Have we not got the heifers because we are keeping the cows

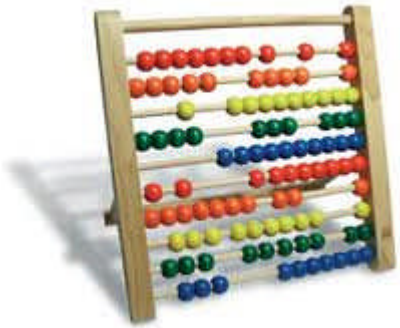
Producing 480kg of Milk Solids per Cow in the Herd



% Calving Profile by Month	Jan	Feb	Mar	Apr	May	June
National Calving Profile	10	39	68	86	95	100
Moorepark	28	68	90	98	100	100

Which Tool should I use?

- Selecting animals on type only.



- Developed before we had access to production data.

- Use of EBI.

- Simple to use but massive data set in the background.

Is Crossbreeding an option?

- International research – USA, Ireland, Northern Ireland, NZ.
- Improved fertility and health traits.
- Production maintained.
- Survive longer.
- Less lameness and SCC problems.
- More profitable – Per day / per ha / lifetime

Can you afford to ignore the evidence?

I don’t like small cows!

You’d get more milk from a cat

What about the bull calf?

Sure nobody would buy them at the mart!

They won’t last – no power to them!

They wouldn’t suit my system – I like to feed cows

The auld fella would go mad if I used Jersey straws

I’d rather loose money than to look at them!

Crossbreeding in USA

Heins and Henson (2012) and Heins et al. (2012a)

	HF	MOX	SCX
Production (KG MS / cow)	761	738	733
Days open	148	122	136
Survival to 3rd lact (%)	51	75	71
Profit / day ($)	4.17	4.39	4.32
Lifetime Profit ($)	4347	6503	6272

Crossbreeding NI

	HF	JFX
Concentrate (kg / cow)	947	963
Yield (kg / cow)	6252	5627
Fat (%)	4.2	4.8
Prot (%)	3.3	3.6
Milk solids (kg / cow)	467	471
Fertility		
Conception rate 1st (%)	35	58
Pregnancy rate (%)	73	89

Crossbreeding on Irish Farms

	Holstein	Jersey	Hol-Jer X
Milk yield (kg)	5073	4093	4899
Milk solids yield (kg)	399	386	421
Calving Interval (days)	389	385	382

- On-farm data from Irish herds – significant crossbreeding .

Crossbreeding

- Complementary breeds – Jersey, Norwegian Red.
- Best bulls within breed essential.
- Cross your best cows!!!
- Don’t judge on first lactation.

What is your ideal cow?

578

- 4th Lact
- Weight - 548 kg
- Sire - TZD
- EBI - 178
- Milk - 4800 litres
- Fat - 5.08%
- Prot - 3.94%
- Lifetime - 1576kg MS

603

- 3rd Lact
- Weight - 462 kg
- Sire - KLK
- EBI - 174
- Milk - 6114 litres
- Fat - 5.04%
- Prot - 3.82%
- Solids – 552kg
- Lifetime - 1274kg MS

476

- 8th Lact
- Weight - 600 kg
- Sire – HZO (20% Je)
- EBI - 207
- Milk - 5500 litres
- Fat – 4.21%
- Prot - 3.21%
- Lifetime - 3011kg MS

470

- 8th Lact
- Weight - 499 kg
- Sire – BWZ (20% Je)
- EBI - 193
- Milk - 5450 litres
- Fat – 4.65%
- Prot - 3.54%
- Lifetime - 3233kg MS

543

- 4th Lact
- Weight - 518 kg
- Sire – BWZ (20% Je)
- EBI - 178
- Milk - 6624 litres
- Fat – 4.94%
- Prot – 4.17%
- Milk solids – 608 kg
- Lifetime – 1970 kg MS

Ideal cow!!

- >800g Milk Solids per kg LWT
- *>320kg MS from own forage*
- Annual milk solids >8.0%

- Calving interval 365 days
- Lifetime milk solids >2500kg
- Ease of management*

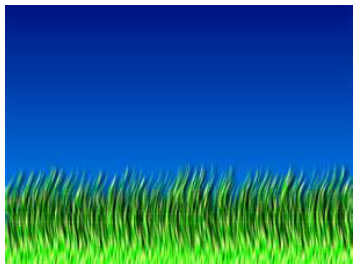
Take Action

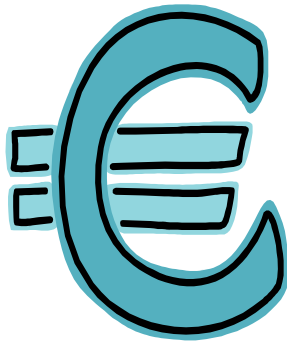
- Cull late calving cows.
- Get rid of stock bull.
- Calve heifers at 2 years old.
- Best genetics – EBI.
- Crossbreeding?

Pasture to profit

Production

- Soil fertility
- Drainage
- Reseeding





Utilisation

•Grazing infrastructure

• Grazing management

- High EBI cows
- High milk solids
- Good fertility