



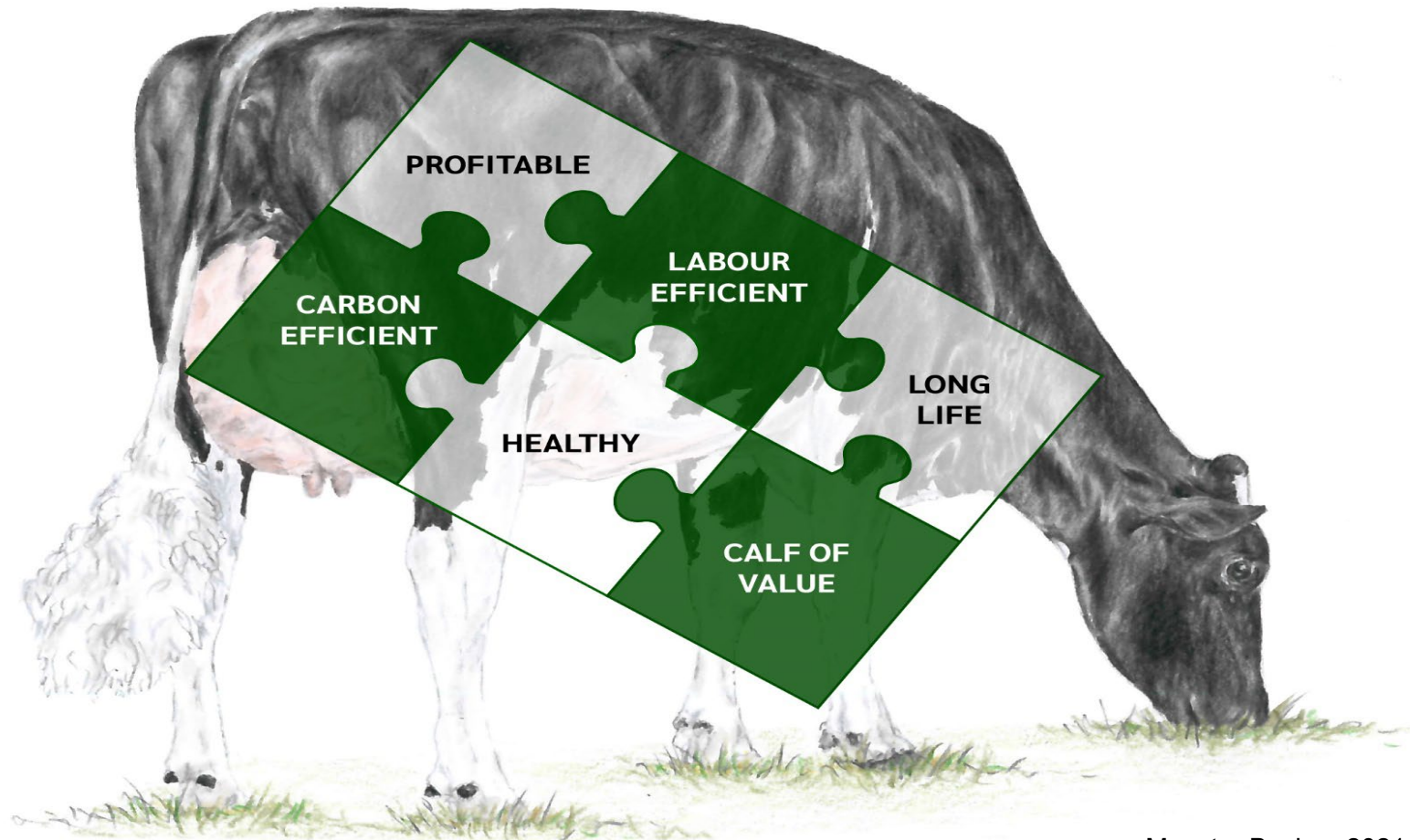
Changes to Organic Stocking Rates – Impact on Breeding Decisions

Dr. Stuart Childs, Teagasc Dairy Specialist, Moorepark

Dr. Joe Patton, Head of Teagasc Dairy Knowledge Transfer

Dr. Laurence Shalloo, Head of Animal & Grassland Research and Innovation, Teagasc

What kind of cow do we want?

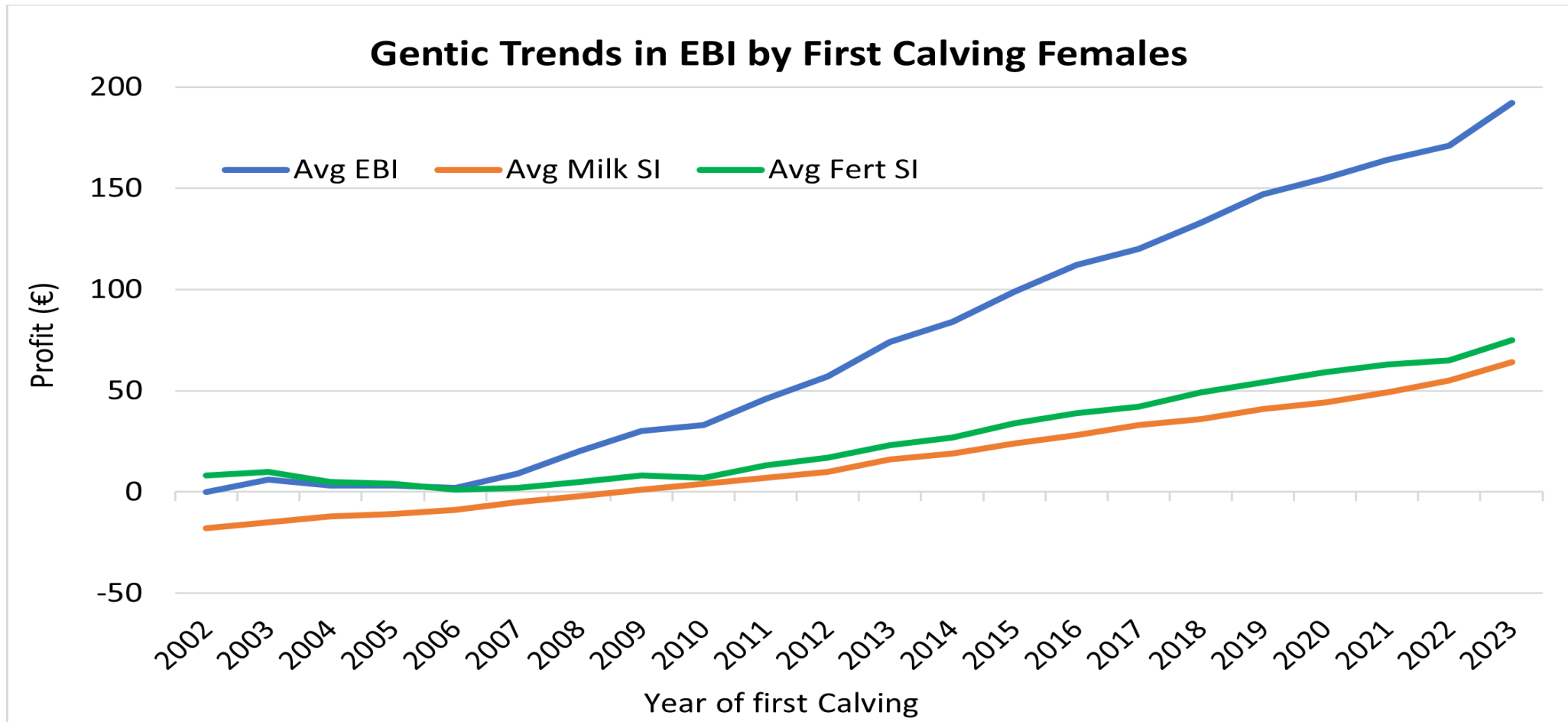


Munster Bovine, 2021

What are the changes to Organic Stocking rates?

- 250 kg N/ha → 220 kg N/ha
 - $250/89\text{kg N/cow} = 2.81$ cows/ha
 - $220/92\text{kg N/cow} = 2.39$ cows/ha
 - $220/106\text{ kg N/cow} = 2.08$ cows/ha
- Does this policy decision require a change in direction in terms of breeding?

EBI Trends



ICBF



EBI has delivered

National Performance Indicators (KPI's) Grouped by Herd EBI						
KPI Metric (2022)	Btm 20%	20-40%	40-60%	60-80%	Top 20%	Average
Average EBI	€98	€139	€158	€174	€196	€153
% Herds Milk Recording	50%	47%	60%	69%	87%	61%
% Herds in HerdPlus	36%	40%	54%	73%	93%	56%
Milk Litres per Cow	5,237	5,116	5,302	5,476	5,663	5,321
Butterfat %	4.08	4.17	4.23	4.31	4.44	4.23
Protein %	3.42	3.48	3.52	3.58	3.66	3.53
Kgs Milk Solids per Cow	404	403	423	444	472	425
SCC	217	212	198	178	151	194
Milk Price (cpl)	57.8	58.8	59.6	60.6	62.3	59.7
Six-Week Calving Rate	58	62	66	72	79	67
Calving Interval (days)	401	391	385	379	367	385
AI Bred Replacements %	38	45	60	74	89	58
Replacement Rate %	17	17	19	20	22	19
Average Parity	3.8	3.9	3.7	3.6	3.5	3.7
Kg CO2 / Kg FPCM	0.94	0.92	0.91	0.90	0.86	0.91

Milk Payment System in Ireland

- A (€/kg Protein) + B (€/kg Fat) – C (processing cost reduction/l) = c/l Paid
- EBI has been breeding for A and B – this increases price received
- Breeding to increasing C will incur a cost
- ‘Energy cannot be created or destroyed’ – Einstein
- $A + B$ aren’t free but C requires less more energy to produce – need to feed more to get less.....
- Milk out of money or money out of milk????

Example- Teagasc Johnstown Castle Herd

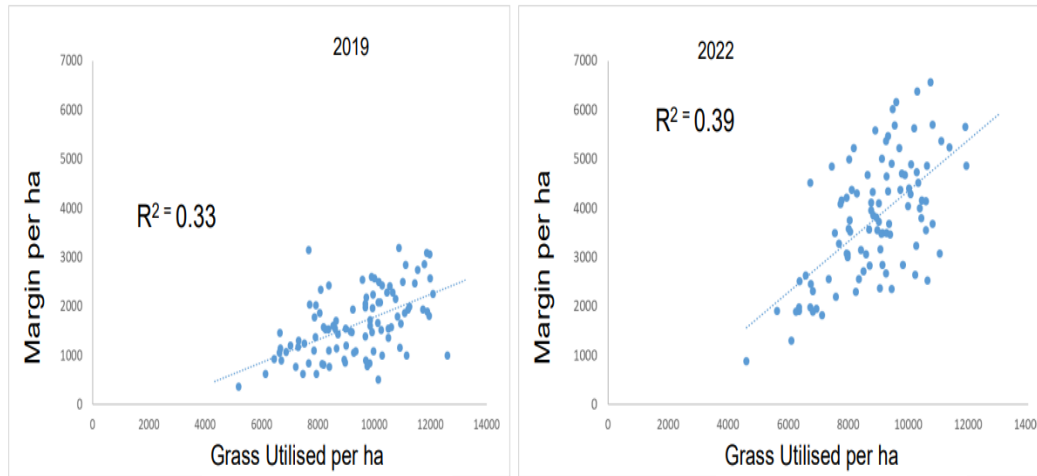
- 3 Systems
- Similar EBI profiles
 - Range in milk solids due to system
 - High components
 - Good fertility

	Your Herd	Glanbia Average	Glanbia Top 10%	Your Rank out of 100	Your Star Rating ¹
Milk performance for 2021 (Jan - Dec) based on Glanbia data					
Fat + Protein (Kg/cow) Average Fat and Protein yield per cow for your herd	564	456	562	89%	* * * * *
Litres per Cow per Day Avg litres of Milk per cow from Jan - Dec 2021	18.46	15.89	20	81%	* * * * *
Fat % to end December 2021 Weighted average Fat % from Jan - Dec 2021	4.43	4.22	4.47	88%	* * * * *
Protein % to end December 2021 Weighted average Protein % from Jan - Dec 2021	3.72	3.53	3.67	94%	* * * * *
Average Milk Price (cpl) Incl. VAT Average milk price received from Jan - Dec 2021, (Includes Bonuses/Penalties, Excludes Levies)	47.7	40.8	43.2	99%	* * * * *
SCC (,000 cells/ml) The weighted average Somatic Cell Count for Jan - Dec 2021	172	210	124	67%	* * * * *
Fertility & Calving data based on HerdPlus 2020 Calving Report					
Calving Interval (days) Average number of days between successive calvings for cows calved during the period	374	413	377	94%	* * * * *
Spring 6 Week Calving Rate Number of cows/heifers calved within the first 6 wks (54) as a proportion of all cows calved during the Spring (65)	83%	52%	81%	94%	* * * * *
% with known Sire and Calving Survey recorded Calves where sire (168) and calving survey (169) are recorded as a proportion of all births during the period (169)	100%	61%	100%	99%	* * * * *
% AI bred replacements Calves born in the period from dairy AI (62) as a proportion of dairy females born (62)	100%	53%	100%	100%	* * * * *
% of Heifers Calved at 22-26 months No. of heifers calved (36) that were between 22 & 26 months of age (36)	100%	45%	92%	100%	* * * * *
EBI Statistics based on the latest HerdPlus EBI report 2022					
Herd EBI (2022) Average EBI for Cows (151) with EBI data	€186	€99	€149	100%	* * * * *
EBI of 2022 Inseminations Weighted Average EBI of dairy AI bulls recorded in Spring 2022	n/a	€235	€286	n/a	
Table of Terms					
Glanbia Average	The average performance of all Glanbia Suppliers				
Glanbia Top 10%	The top 10% cut off point of all Glanbia Suppliers				
Your Rank out of 100	Your performance expressed across all Glanbia herds eg. 1% = Bottom Supplier, 50% = Average Supplier 100% = Top Supplier				
Your Star Rating	Your performance is displayed in stars e.g. 1 star is bottom 20% and 5 stars = top 20%				
Eligible Cows	Number of dairy cows in the herd on December 2021				
¹ * = 0 - 20% ** = 21 - 40% *** = 41 - 60% **** = 61 - 80% ***** = 81 - 100%					

Milk Profiles	SPR	SPLIT	AUT
Milk kg	6291	6794	7461
Fat %	4.45	4.44	4.48
Pro %	3.73	3.72	3.71
Milk solids	515	554	611
Profile analysis			
Summer peak	27.4	24.8	23.3
% total Nov-Feb	<10	29.4	43.2
Days dry	38	0	0
Peak : trough		1.5	4.7

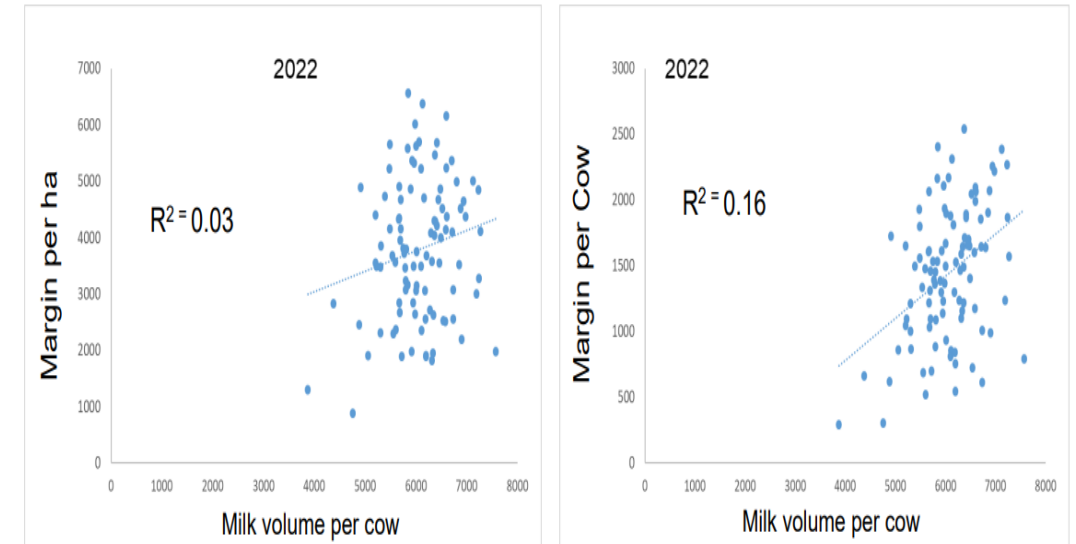
Focus on what delivers return

Pasture Utilised v Margin per ha



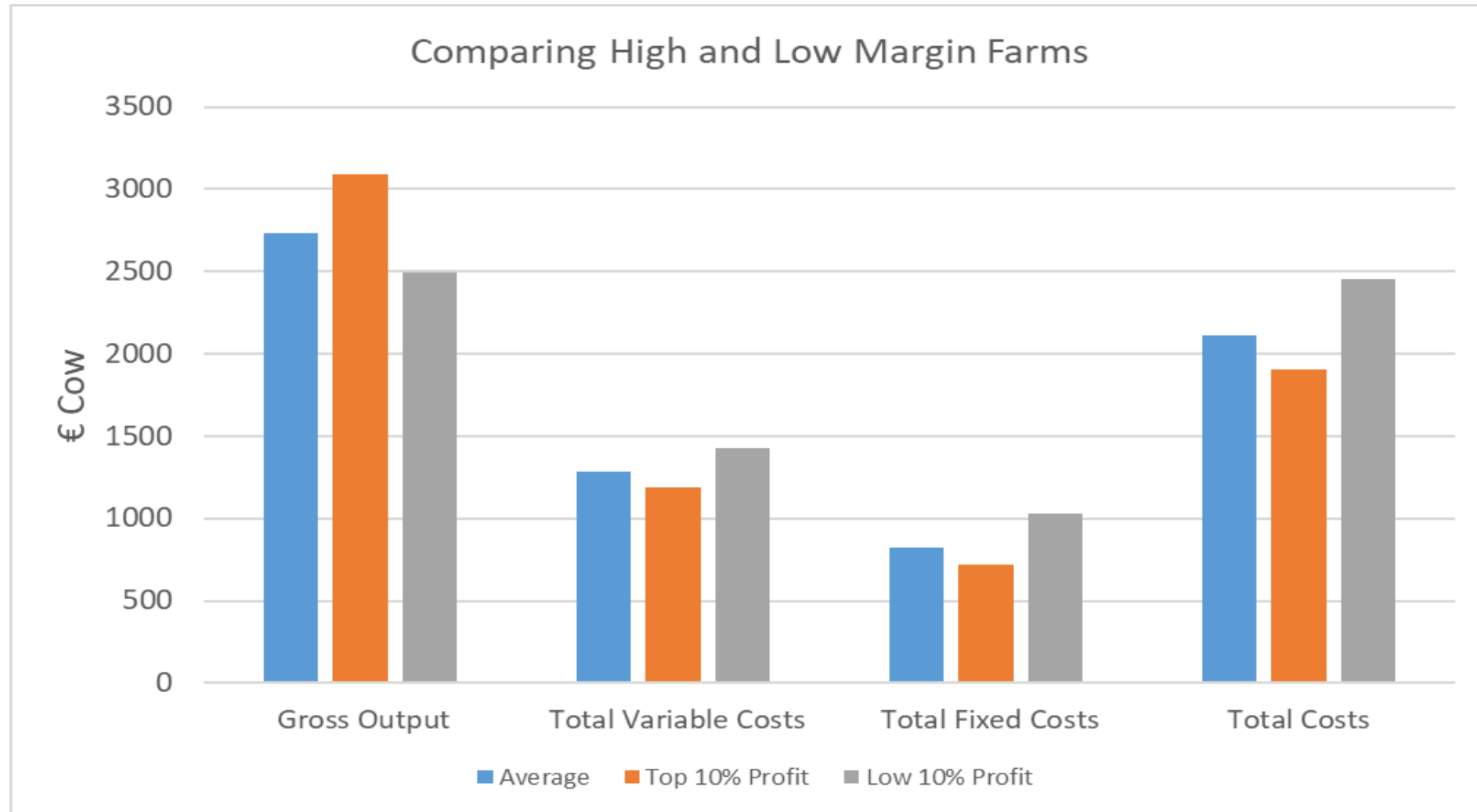
- Pasture utilised- strong positive relationship to margin per ha within year
- Consistent effect across years with very different price/cost bases

Output per Cow and Margin



- Milk yield (or solids) had a weak relationship to margin per ha
- Moderate to weak relationship to margin per cow
- Similar across both years (no effect of price/cost variations)

What drives profit on Irish Dairy Farms?



Physical Performance

Item	Average	Top 10%	Bottom 10%
Whole farm SR	2.22	2.29	2.13
Milking Platform SR	2.95	2.92	2.96
Cows (average)	152	153	166
Milk Solids/cow	472	511	443
Concentrates (dm/cow)	1,063	1,105	1,165
Purchased fodder/cow (€)	32	35	30
Grass Grown (t dm/Ha)	11.38	12.3	10.22
Grass Utilized (t DM/Ha)	9.10	9.84	8.17

Top 10% vs Bottom 10%

SOURCE OF DIFFERENCE HIGH V LOW MARGIN FARMS

Total Fixed Costs
-27%

Total Variable
Costs
-21%

Gross Output
52%

Lower Vet Costs – better health

Lower overhead costs

Milk Solids/milk price

Grass intake

Calving Date – Lactation length

Better Fertility – lower repl. rate
Cull poorer performers

Scenario testing

- Evaluating the impact of differing policy changes on the economic values within the EBI
- Clear that policy changes are coming in one form or another
- Need to be sure EBI ranking is relevant across scenarios

Indices

Current	Cow numbers fixed – Feed purchased in
Cows Fixed	Cow numbers fixed – land area changing
Emissions Fixed	Emissions fixed - Cow numbers changing
Organic N Fixed	Organic N fixed – Cow numbers changing
Current Higher Costs	Cow numbers fixed – Feed purchased in (Higher costs)
Current higher Costs & Price	Cow numbers fixed – Feed purchased in (Higher costs&price)
Current High Input	Cow numbers fixed – Feed purchased in
High Input High Costs	Cow numbers fixed – Feed purchased in
High Input High Costs & Price	Cow numbers fixed – Feed purchased in (Higher costs & price)

Economic Value – by scenario

Index	Milk	Fat	Protein	Survival	Calving Interval	Maintenance	Gestation
Current	-0.0935	2.081	5.877	12.431	-12.586	-0.740	-7.929
Cows Fixed	-0.06819	3.573	6.552	16.022	-4.427	-0.224	-2.789
Emissions Fixed	-0.08781	2.806	6.273	17.698	-25.337	-0.734	-15.962
Organic N Fixed	-0.09327	2.347	5.161	12.748	-16.312	-0.762	-10.277
Baseline Higher Costs	-0.09366	2.075	5.872	13.200	-12.515	-0.744	-7.885
Baseline higher Costs Higher Milk Price	-0.09259	2.676	6.897	14.381	-12.711	-0.744	-8.008
High Input 2021	-0.08879	2.617	6.064	13.931	-16.180	-0.629	-10.194
High Input High Costs	-0.10006	2.053	5.758	12.496	-18.608	-0.872	-11.723
High Input High Costs/High Milk Price	-0.09921	2.658	6.787	13.993	-18.842	-0.872	-11.870

Across Breed Correlations

Index	curr ent	cow fixed	emissions fixed	Organic N fixed	base_higher _costs	base_high costshigh milk	high input	High costs	High costs High price
current	1.00	0.99	0.99	1.00	1.00	1.00	1.00	1.00	1.00
cow_fixed	0.99	1.00	0.98	0.99	1.00	1.00	0.99	0.99	0.99
emissions_fixed	0.98	0.96	1.00	1.00	0.99	0.99	1.00	1.00	1.00
organicN_fixed	1.00	0.98	0.99	1.00	1.00	1.00	1.00	1.00	1.00
base_higher_costs	1.00	0.99	0.98	1.00	1.00	1.00	1.00	1.00	1.00
base_high_costs_high_milk	1.00	0.99	0.98	1.00	1.00	1.00	1.00	1.00	1.00
high_input	1.00	0.99	0.99	1.00	1.00	1.00	1.00	1.00	1.00
high_costs	1.00	0.98	0.99	1.00	1.00	1.00	1.00	1.00	1.00
high_costs_high_price	1.00	0.98	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Summary

- EBI has delivered for Irish farmers
- Genetics delivers the potential – management will realise this potential

A Ferrari without fuel won't go anywhere

- Follow the money – focus on EBI to continue to breed PROFITABLE cows
- Policy changes should not alter your focus