



IRISH CATTLE BREEDING FEDERATION

# IHFA Cork Club 27<sup>th</sup> Jan 2014



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# For tonight....

- Sexed Semen
- Update on EBI

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# The future role for sexed semen in the Irish dairy industry

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# Sexed semen

- CR 75% of Conventional: ie. 50% vs. 37%
- Recommended for use on heifers only
- Drop in CR not suitable for Irish seasonal system
- NZ data suggest near-normal CR with fresh sexed

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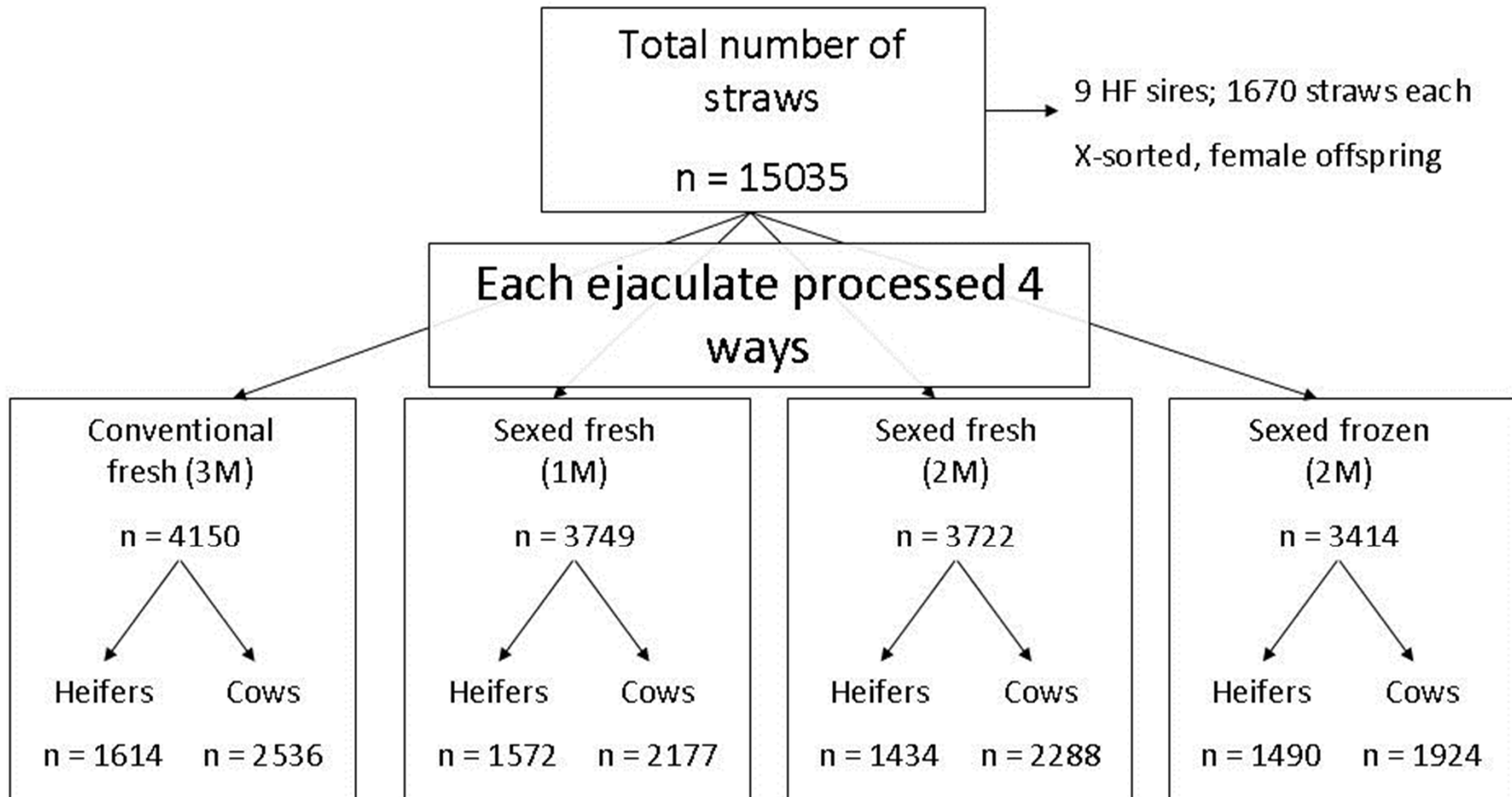
# Field trial

- Establish the potential of sexed semen in Ireland
  - dairy cows and heifers
- Dairy trial carried out in Spring 2013
- Industry partnerships and funding
- 15,000 inseminations
- 392 farmers, 100 AI technicians

## Sexed Semen Research Partners



# Holstein Friesian - Study Design



## Sexed Semen Research Partners



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# Data collection

- All insems recorded on handhelds directly to ICBF
- Pregnancy diagnosis and BCS on ~ 4000 animals
- 2000 animals scanned and sexed
- Full results with calves on the ground in 2014

## Sexed Semen Research Partners



# Effect of sexing on conception rate

Heifers (n = 1478)		
Treatment	CR to 1st Service	CR as a % of Conventional
Conventional	53%	100%
Sexed Fresh 1m	39%	75%
Sexed Fresh 2m	46%	87%
Sexed Frozen	46%	87%

Cows (n = 1684)		
Treatment	CR to 1st Service	CR as a % of Conventional
Conventional	49%	100%
Sexed Fresh 1m	32%	64%
Sexed Fresh 2m	37%	76%
Sexed Frozen	42%	85%

## Sexed Semen Research Partners





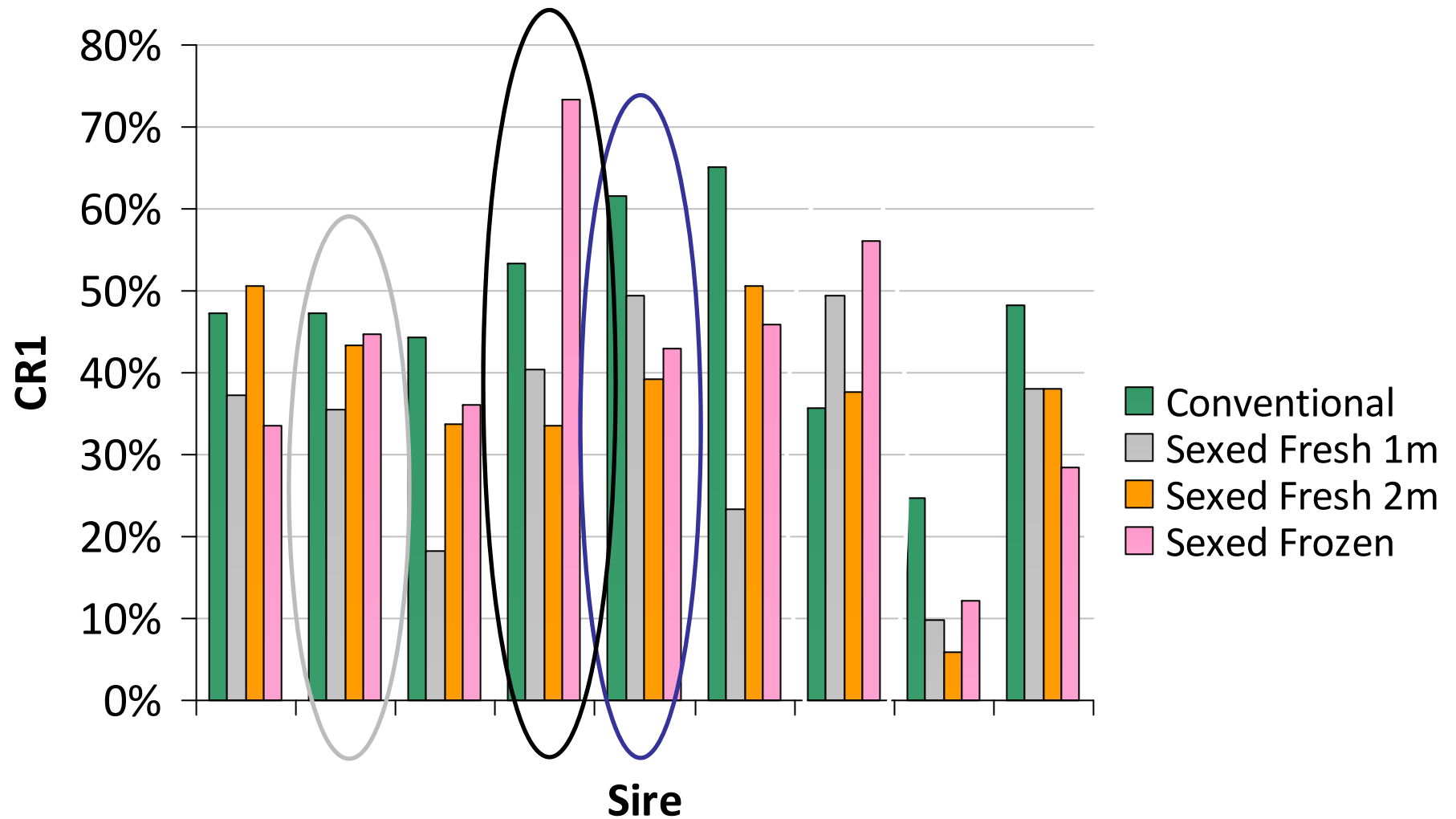
# Sex ratio by treatment

Treatment	Number of pregnancies	Heifer calves	% heifer calves
Conventional	244	134	55.0%
Sexed Fresh 1m	138	125	90.8%
Sexed Fresh 2m	154	139	90.2%
Sexed Frozen	172	156	90.7%
<b>Overall (sexed treatments only)</b>	<b>464</b>	<b>420</b>	<b>90.5%</b>

## Sexed Semen Research Partners



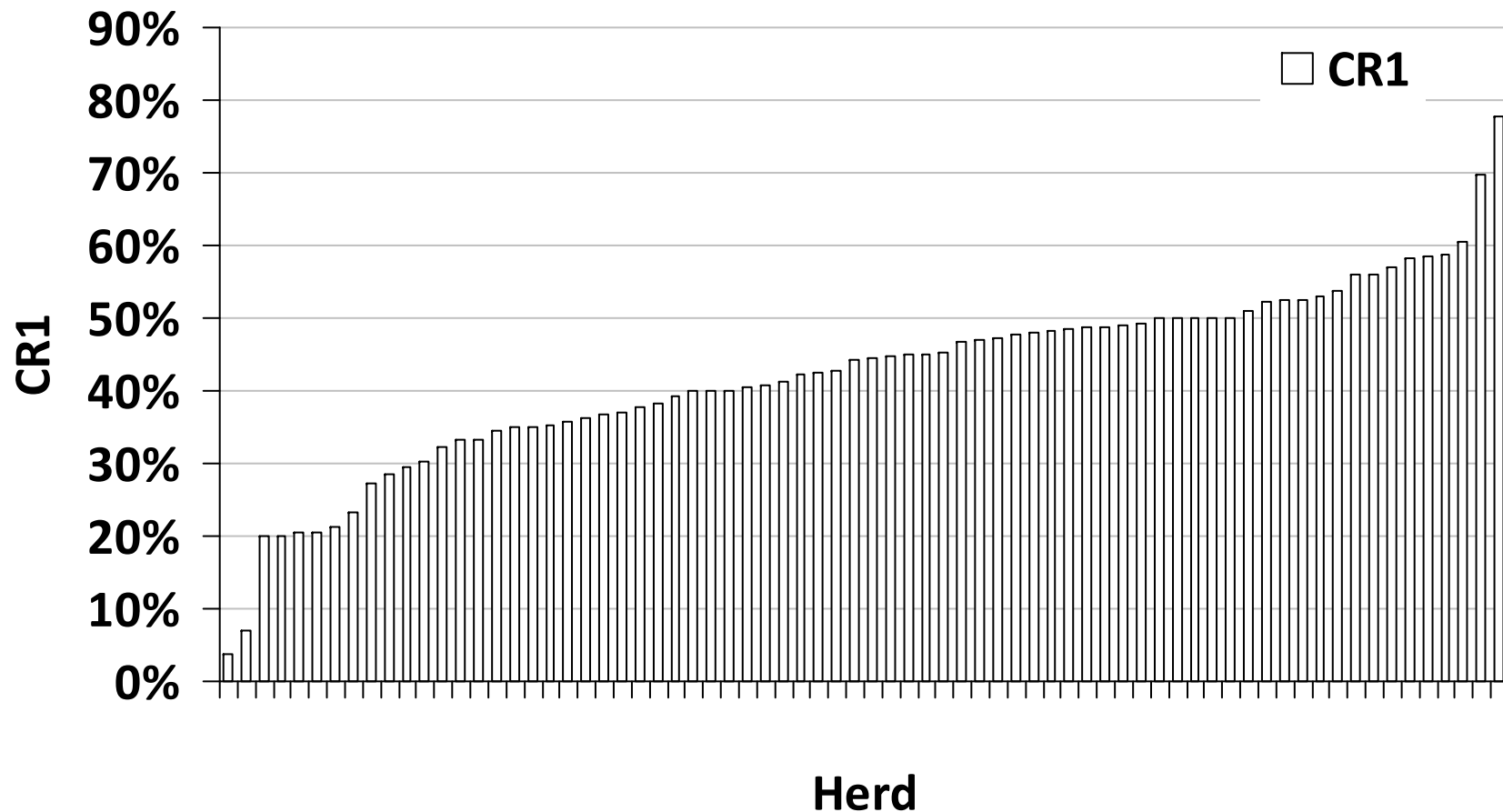
# Sire \* Treatment Comparisons



## Sexed Semen Research Partners



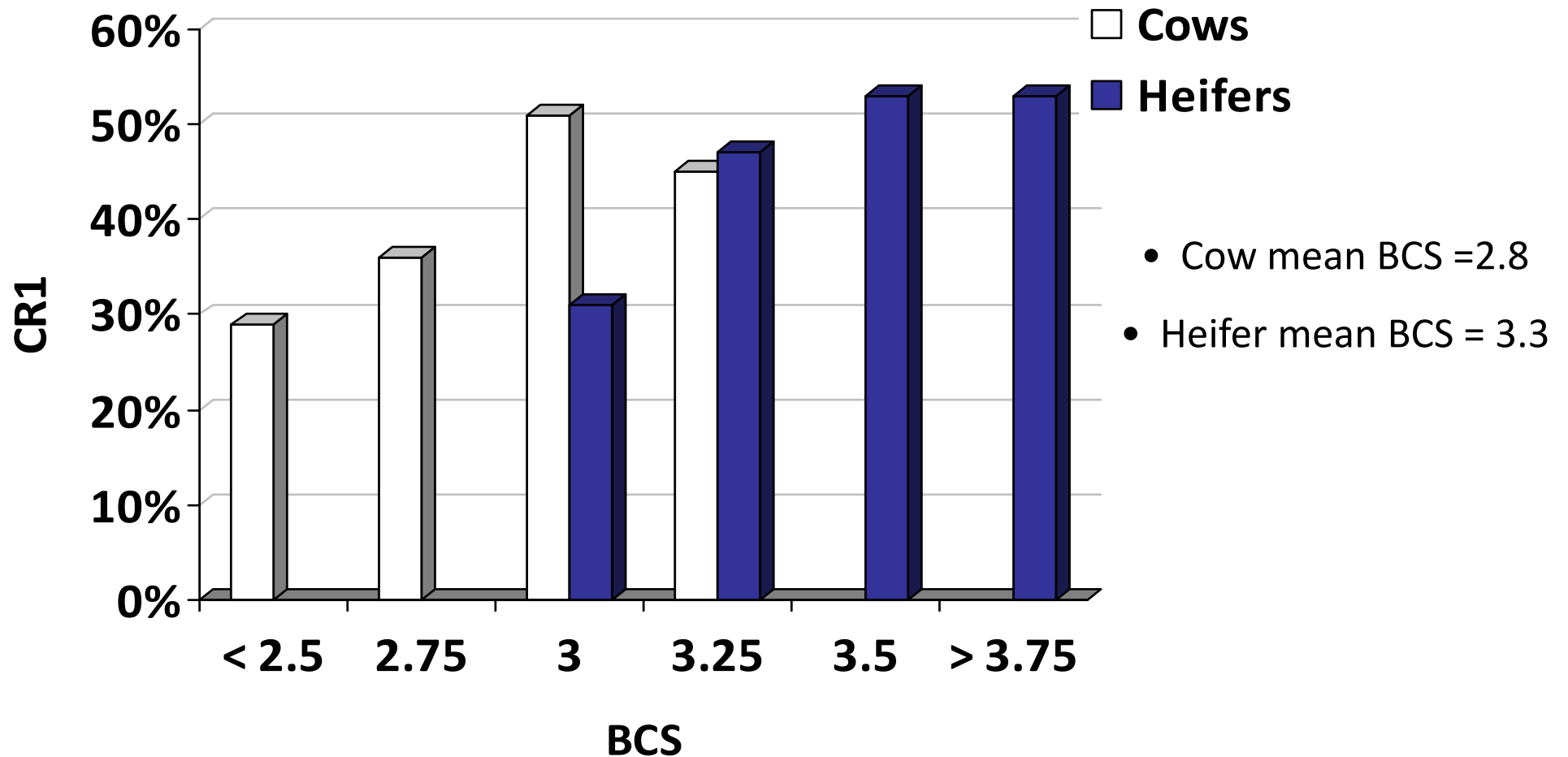
# Herd variation in conception rate



## Sexed Semen Research Partners



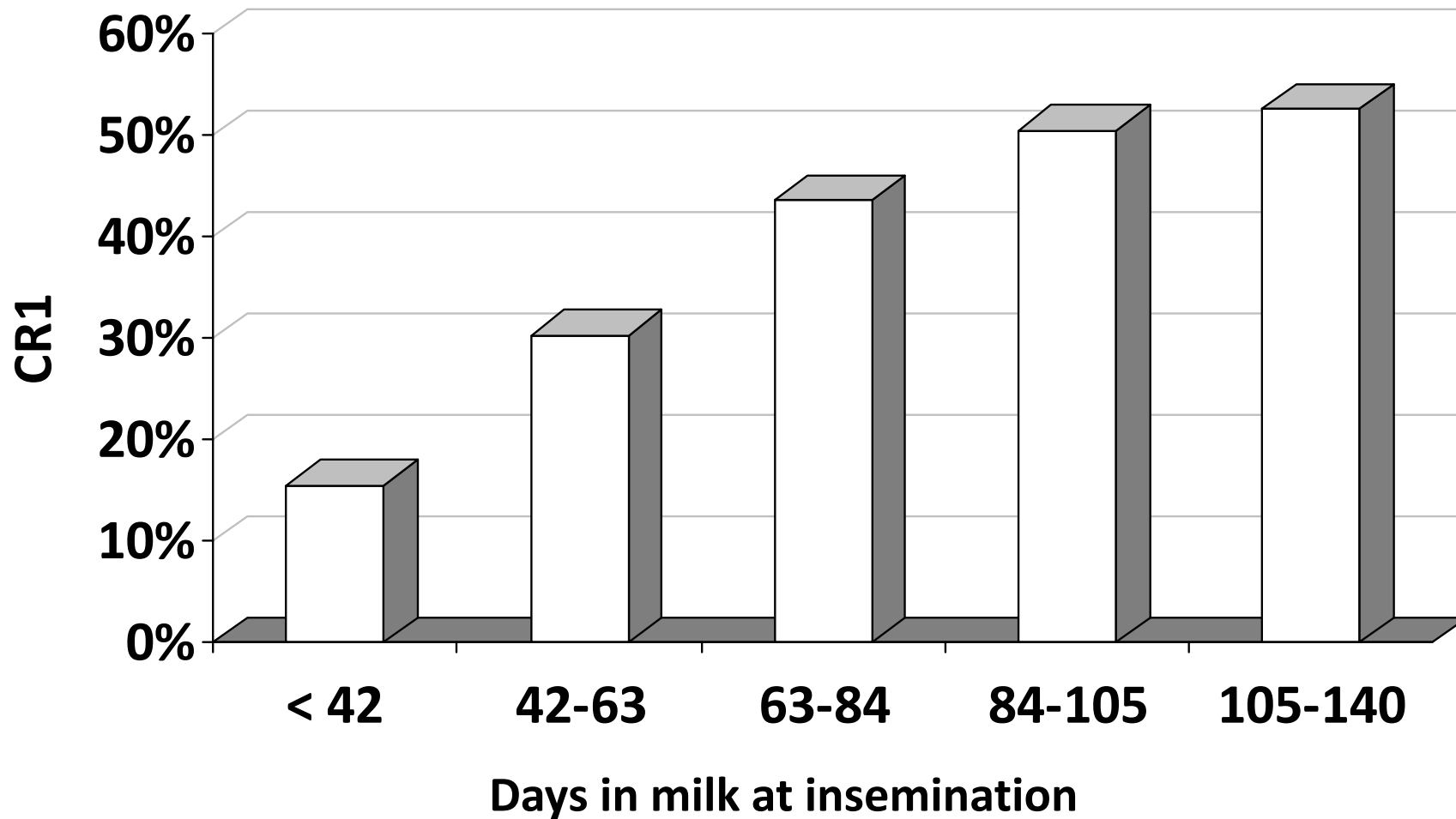
# Effect of BCS on conception rate



## Sexed Semen Research Partners



## Effect of DIM at insemination on conception rate



### Sexed Semen Research Partners



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## Where to now?

- Very pleased with the sexed frozen results in general
- Wide range of views at farm level – strong view emerging that on-going research is needed, one year is not enough
- Real challenges for AI companies in terms of their business
  - Less dairy semen
  - Potential for low conception rates
- Clearly it won't be suitable for everyone – strong technical performance at farm level is a pre-requisite

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## So for 2014....

- Calves starting to hit the ground, a real buzz with seeing heifer after heifer arriving
- Won't be a lab in Ireland this Spring, but will be a stock of trial semen from last year and from other sources
- Looking to set up a longer term arrangement in conjunction with AI companies, Teagasc Research and Wider Agri-Industry from 2015 onwards.



# Acknowledgements



All smiles as fresh sexed semen trial goes live

Donal O'Leary



Richard Gears, Seamount, Currabinny, Carrigaline, Co Cork, shares a joke with Munster Cattle Breeding Group AI technician Tom Tobin while he inseminates one of Richard's cows as part of the new sexed semen trial which began this week. Over 300 herds, covering some 8,000 cow inseminations and 7,000 heifer inseminations, are involved in the project. Despite battling with weather and tight fodder supplies, the farming calendar continues, with the breeding season about to kick off.





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# EBI News

- Base Change
- Test Day Model
- Health and Disease Traits

# Base Change

	Change	€ Change Overall
Milk	-114.5	
Fat	-5.4	
Protein	-6	-32
CI	2.8	
SUR	-0.96	-44
		-76

Parity	Num. Cows	Milk Kg	Fat Kg	Protein Kg	Fat %	Prot %	CIV
1	59,894	5540	216	188	3.90	3.39	399
2	53,871	6248	244	216	3.91	3.46	399
3	45,769	6587	258	227	3.92	3.45	397
4	36,331	7053	276	244	3.91	3.46	392
5	24,571	7026	277	243	3.94	3.46	381
1 - OLD	73,000	5194	197	171	3.79	3.30	404

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# Base Change

Introduction of new models (TDM), or Economic Values may cause re-ranking however a base change DOES NOT cause a change in bull **rankings**

Each animal is affected equally

Necessary to ensure people can compare their animals to a relevant group of cows

Current plan to introduce this August

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# Test Day Model

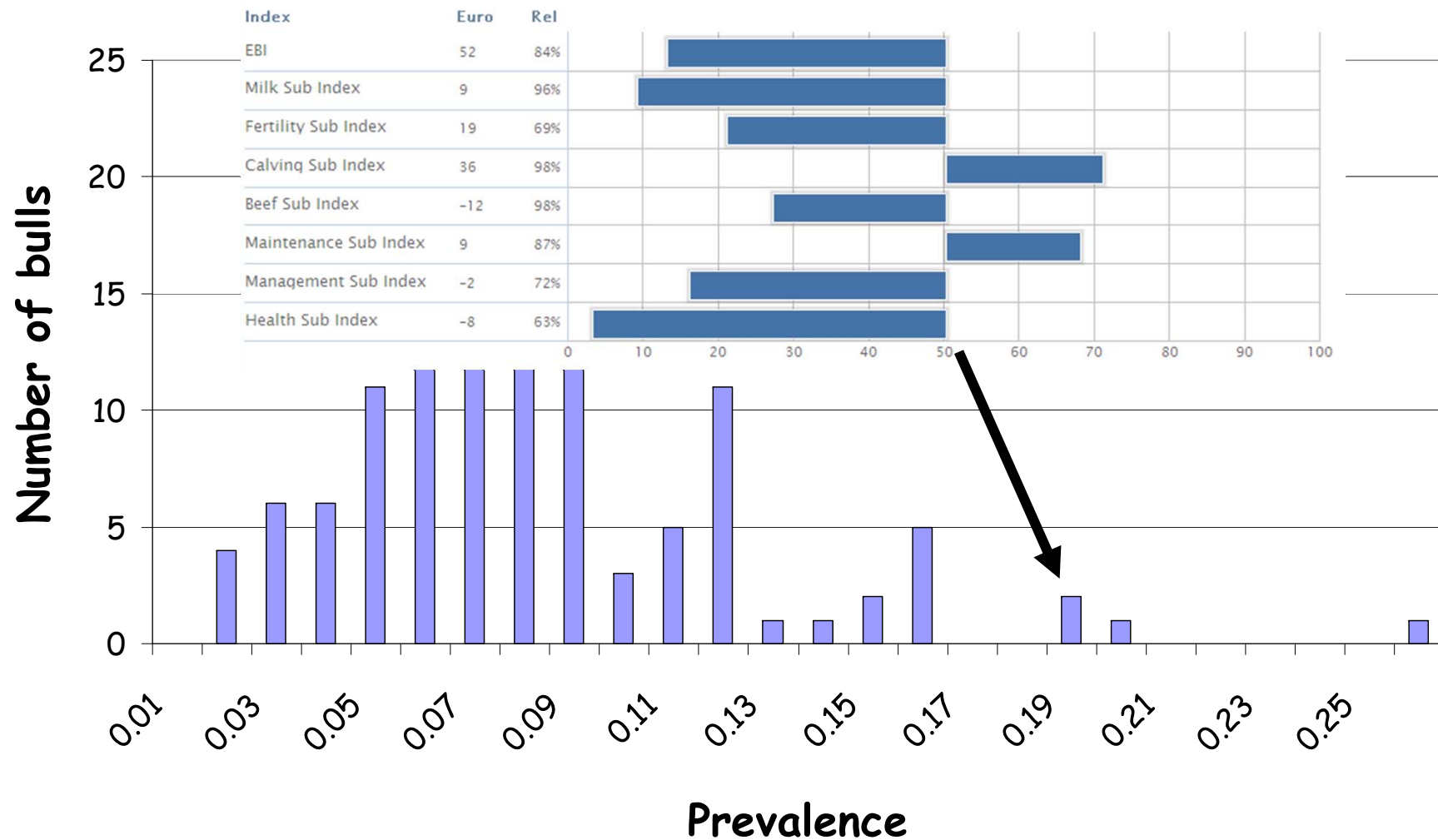
- Test Day Model for Milk Production
  - a more effective way to do milk evaluations
  - The most common model around the world
- We got high correlations with existing results for both bulls (0.97) and cows (0.92) but.....
- Some of the results around FAT were not satisfactory and we were not happy that the proofs were correct
- We have submitted another test run to Interbull, but still not happy that we have got to the bottom of the issue

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# Genetics of Health and Disease

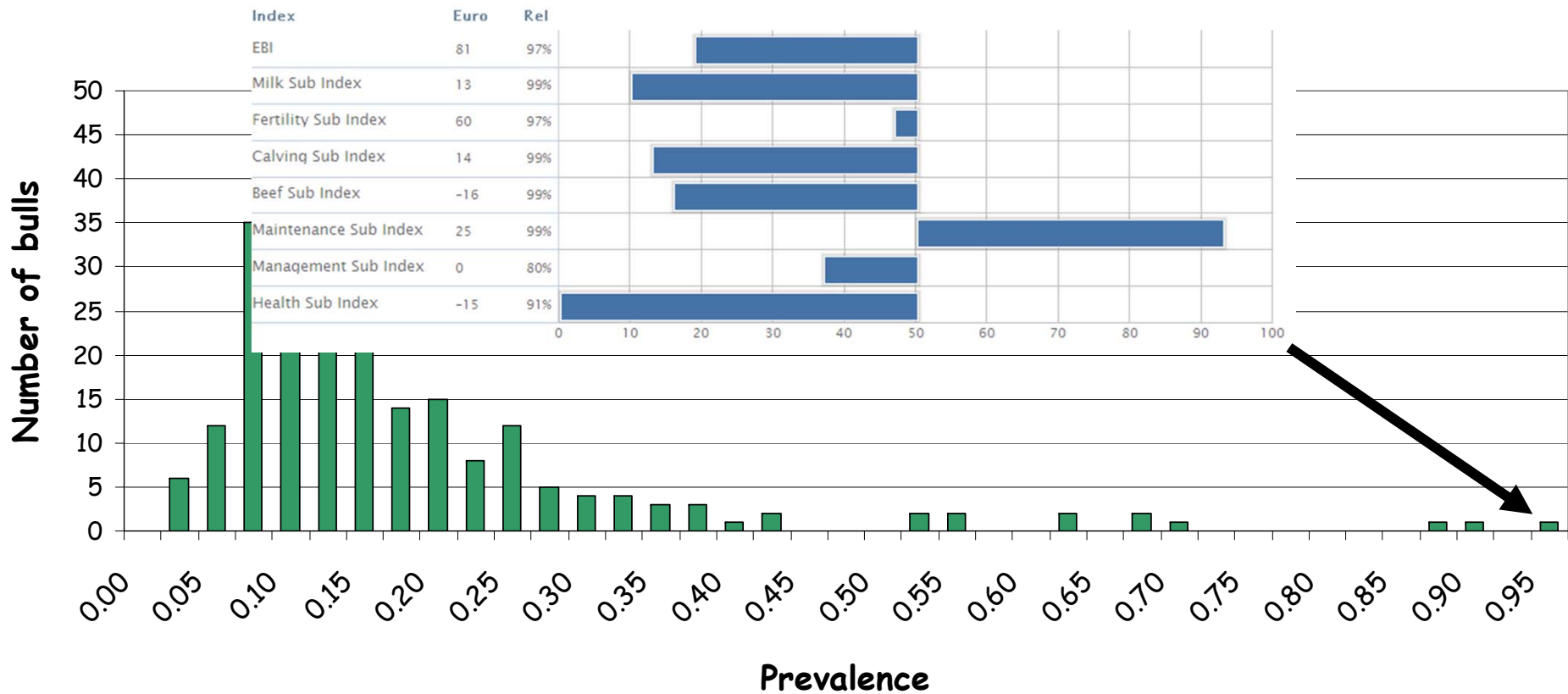
- Genetics of health and disease will be a key focus area
- It is the next 'Fertility' issue to be dealt with
- Similar discussions as we had with fertility
  - Breeding can't solve it
  - Heritability is too low
  - Etc
- Kicking off a Pilot project (100 herds)

# BVD - sire prevalence



D Berry, Teagasc

# TB - sire prevalence



*Ian Richardson*

D Berry, Teagasc

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# Questions?