

Moorepark labour survey data

Strategies and practices to increase efficiency

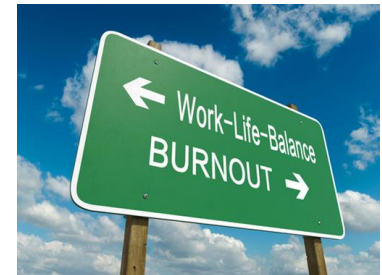
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*Animal and Grassland Research and Innovation Centre,
Teagasc, Moorepark, Fermoy, Co.Cork, Ireland*

Positive Farmers Conference
17th January 2019, Cork

Why think about labour efficiency?

- Labour is one of the highest costs on farms
 - Highly dependent on unpaid help
 - Need to be efficient before expansion
- The farm works you?
- Save time: more time, less problems
- Farm safety
- Making work more enjoyable



Attractive career?

FARM IRELAND

Monday 24 April 2017

AGRI-BUSINESS

DAIRY

BEEF

SHEEP

TILLAGE

MACHINERY

RURAL LIFE

Why farmer 'burnout' could derail dairy sector growth (90-hour working weeks 'not unusual')

Farmers overwhelmed by workload says Dairygold boss as co-op launches shareholder survey



61%

viewed time off as the main factor when choosing a career



69%

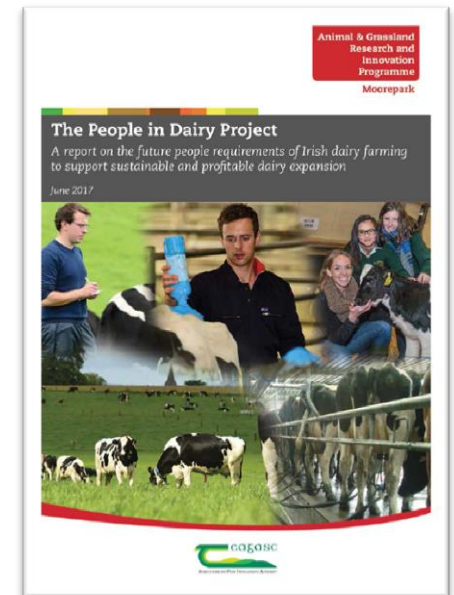
agreed or strongly agreed that working hours were too long in dairy farming



- Long hours
- Hard work
- Inferior work/ life balance

‘The vision’

- Dairy farms must be safe and enjoyable places to work
- Recruit 6000 people by 2025 (Kelly et al. 2017)
- Employment relationships
- Offer career progression
- Labour efficiency

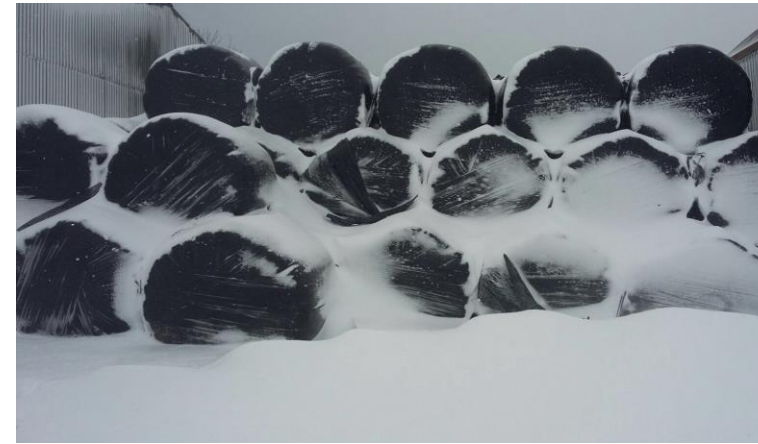


A review of spring 2018

Objective:

To understand the scale and depth of the issues faced by farmers in spring 2018

- Teagasc Dairy Advisors
- 20 questions, 17 closed ended
- May – June 2018



Overview



- 349 farmers (37 discussion groups, 12 counties)

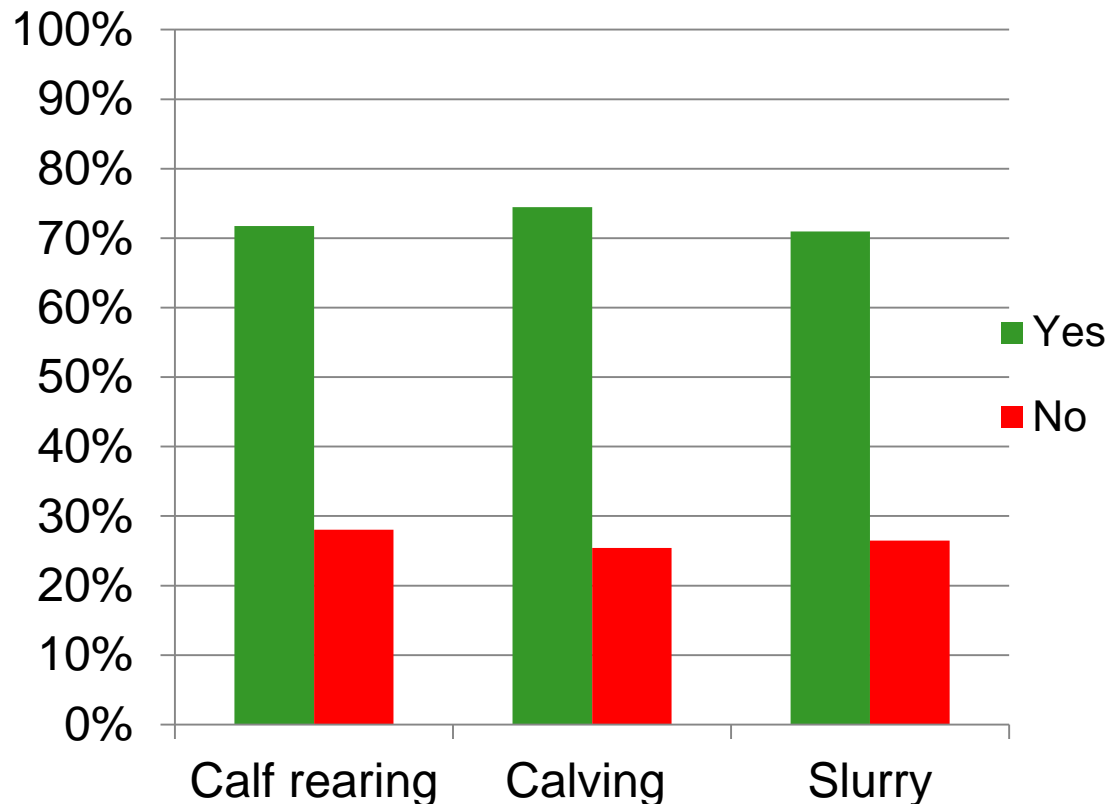


- Average no. cows calved: 160 cows
- Farm size: 54 ha

Facilities on farm

- Milking: 10 rows
- Average 0.9 cubicle/ cow

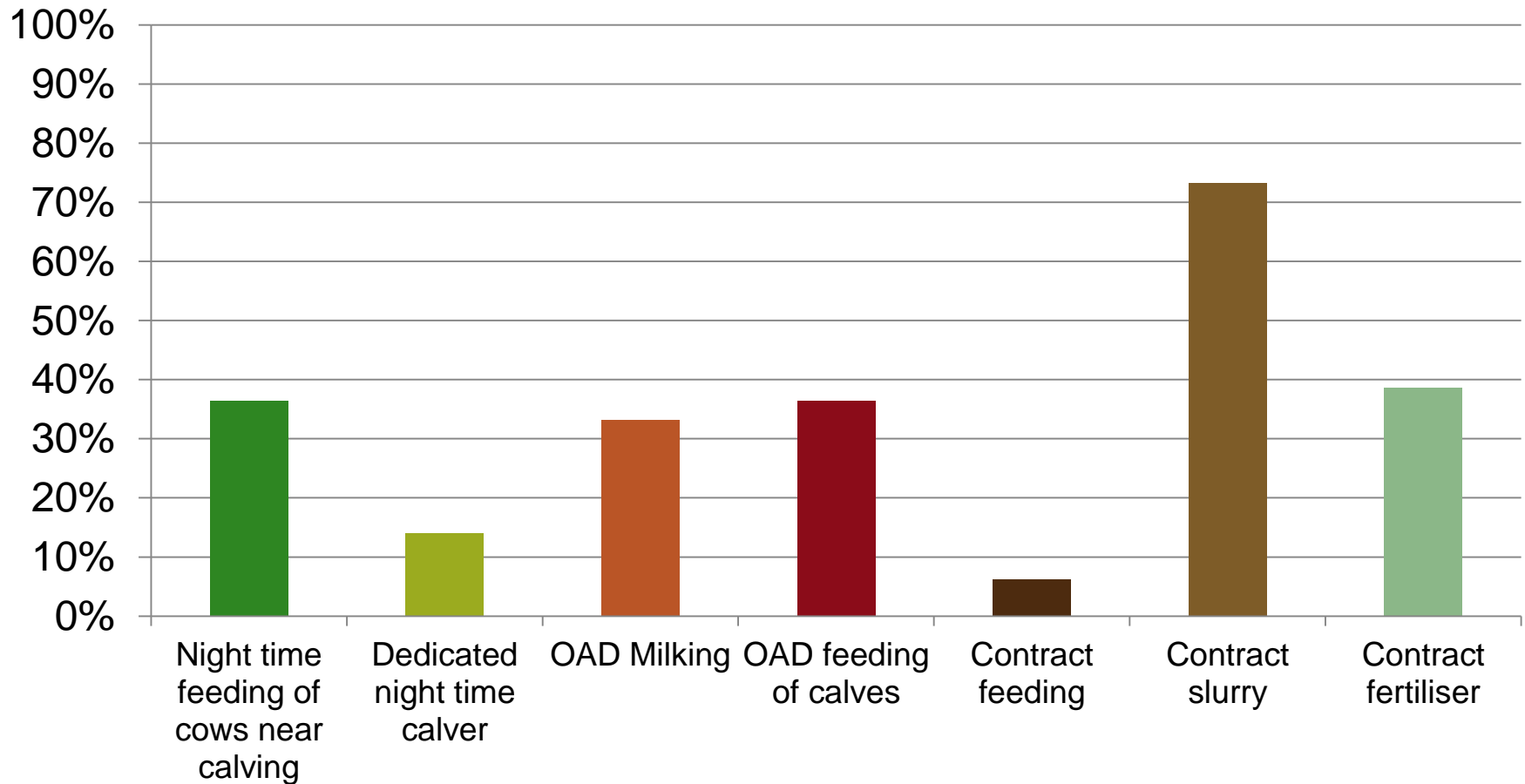
Self-assessment of facilities



- 73% describe these facilities as being adequate
- 34% planning on investing in facilities and infrastructure

Labour saving practices

Did you implement any of the following practices this spring?

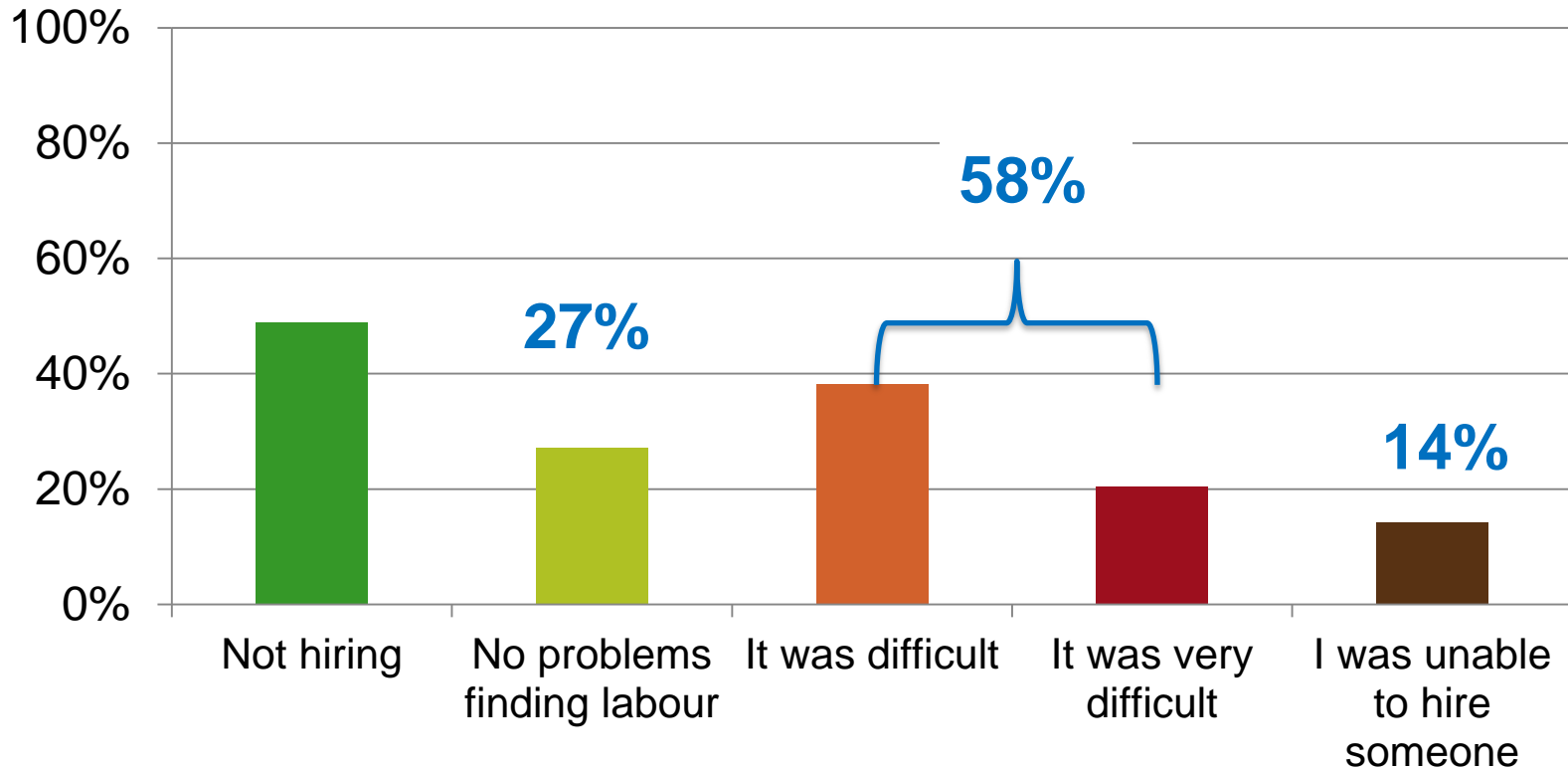


Hours worked in March 2018



- 12.4 hours/day
 - 86 hours/week
 - < 1 day off in March
-
- Potential consequences for:
 - Health and safety

Hiring staff



- 50% of farmers wanted to hire staff

The Question

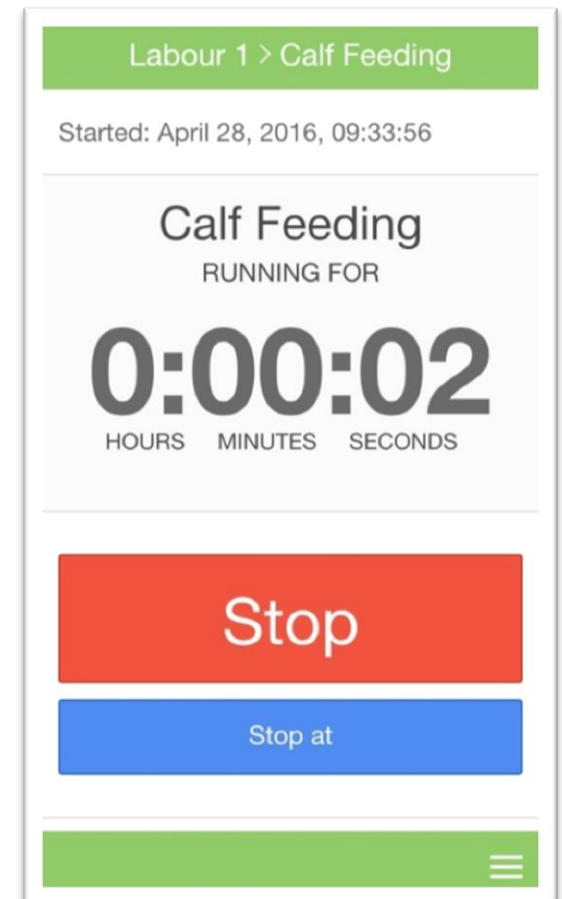
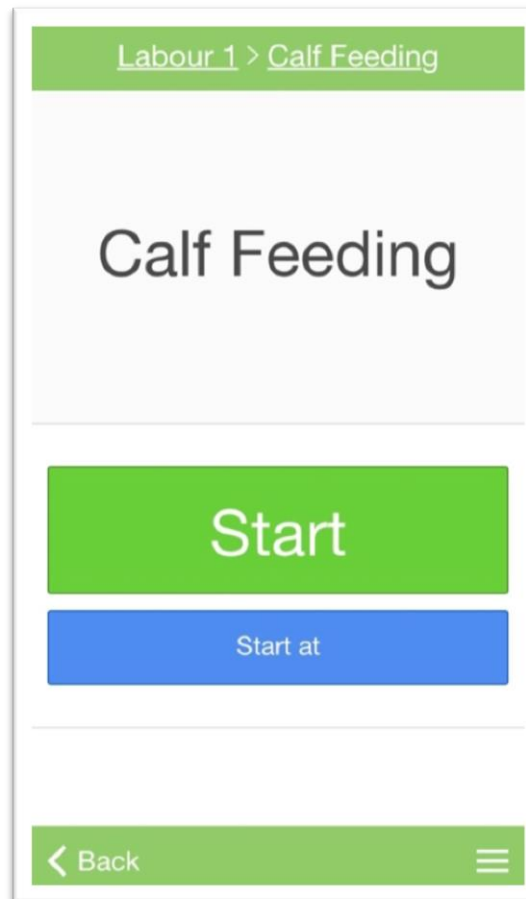
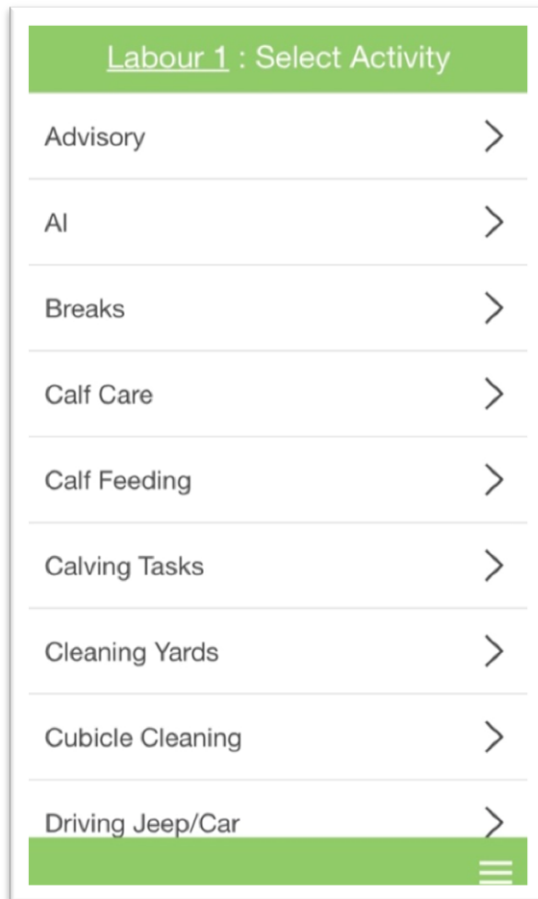
- To quantify the current levels of labour input
 - facilities and management practices associated with increased labour efficiency

The study

- Thirty-eight dairy farms, previously identified as labour-efficient farms
- Data collected over 3 consecutive days each month
 - May 2015 to August 2016
- Data was recorded through
 - a smartphone application (farmers and some staff)
 - online survey (for remaining labour)



The app

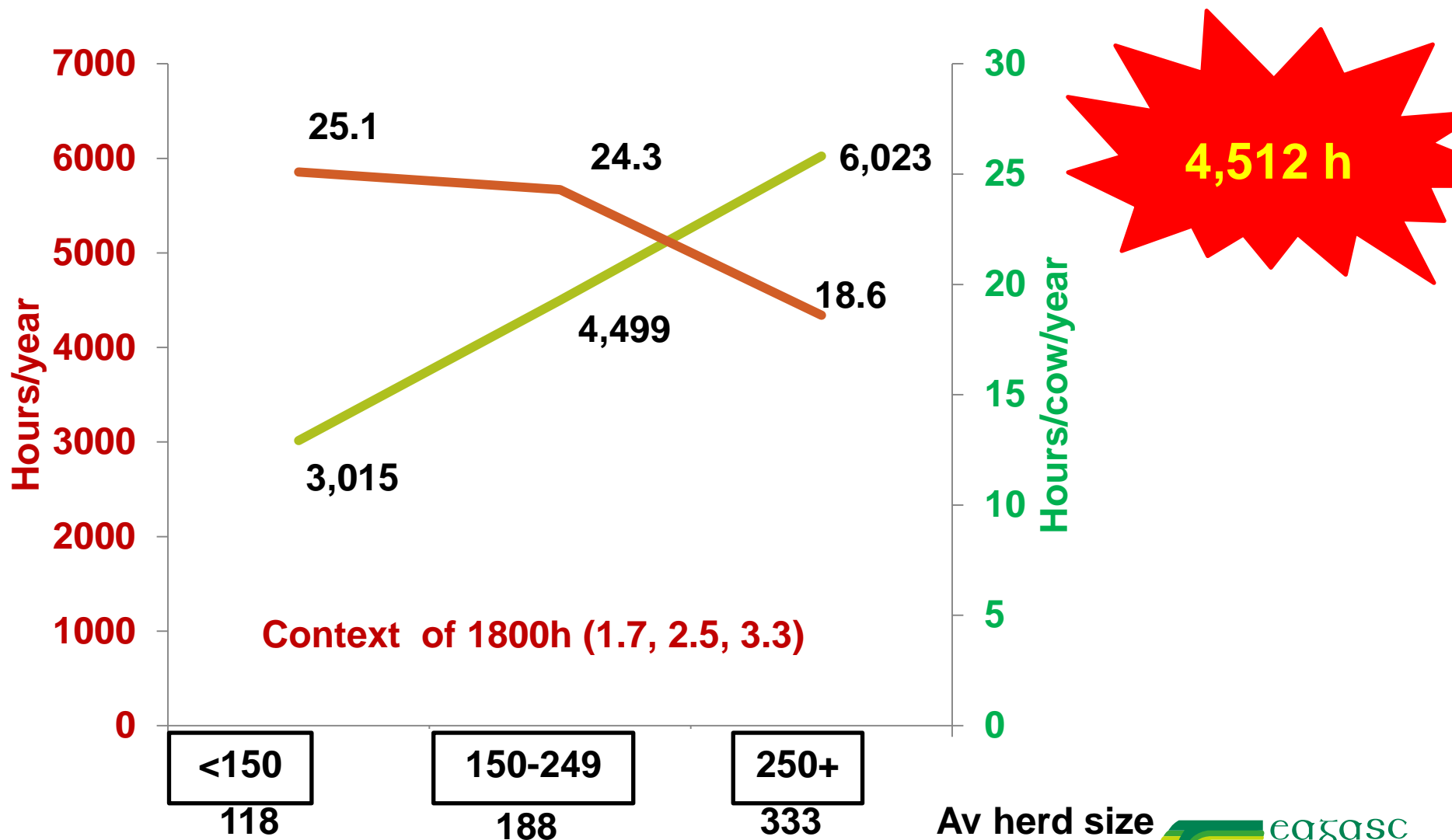


Herd Size Categories (HSC)

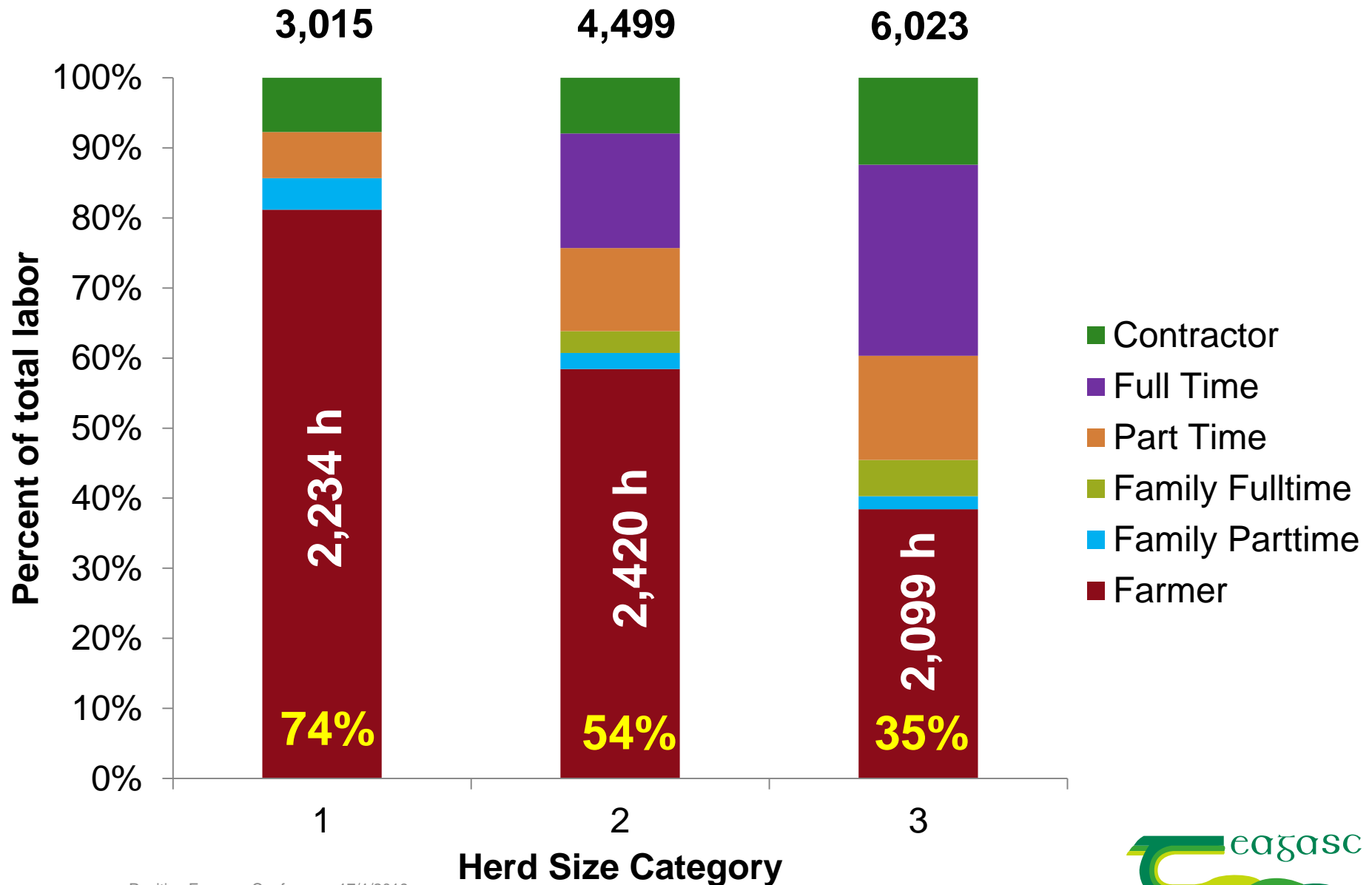
HSC	PARAMETER (cows)	RANGE (cows)	AVERAGE (cows)	# FARMS IN STUDY
1	<150	79-149	118	16
2	150-249	150-249	188	13
3	250+	253-534	333	9



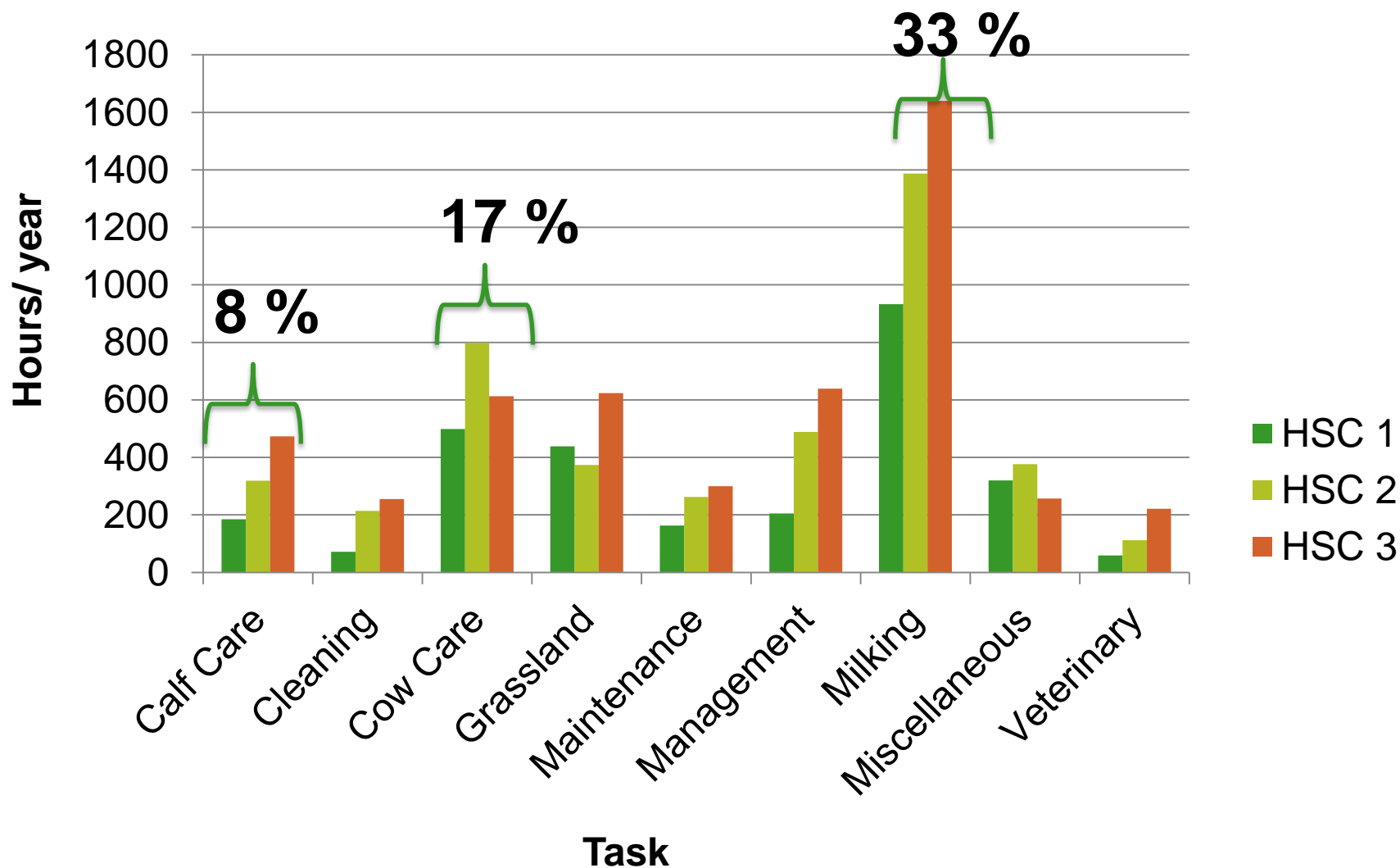
Total hours worked and labour efficiency (across HSC)



Proportion of labour contributed by different people



Time spent at tasks annually



Differences between the most and least efficient farms: Milking

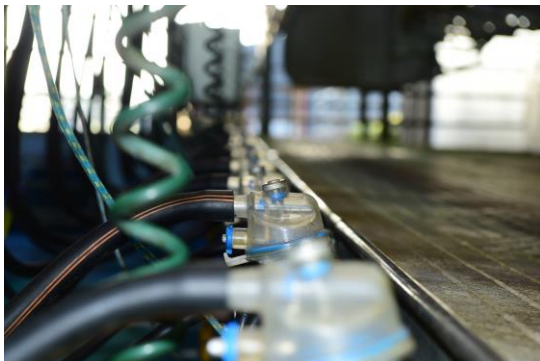
Most Efficient

- Most OAD milking (first 4 wks)
- More units (av 9 rows)
- More operating backing gate

*OAD = once a day

Least Efficient

- Few OAD milking (first 4 wks)
- Less units (av 11 rows)
- Less operating a backing gate



Differences between the most and least efficient farms: Cow care

Most Efficient	Least Efficient
<ul style="list-style-type: none">• Most feeding silage every 2nd day• Fewer feed areas	<ul style="list-style-type: none">• Most fed daily• More feed areas



Differences between the most and least efficient farms: Calf care

Most Efficient

- Shorter distance to calf location
- Few used individual pens
- Calves turned out to grass at 6 wks

Least Efficient

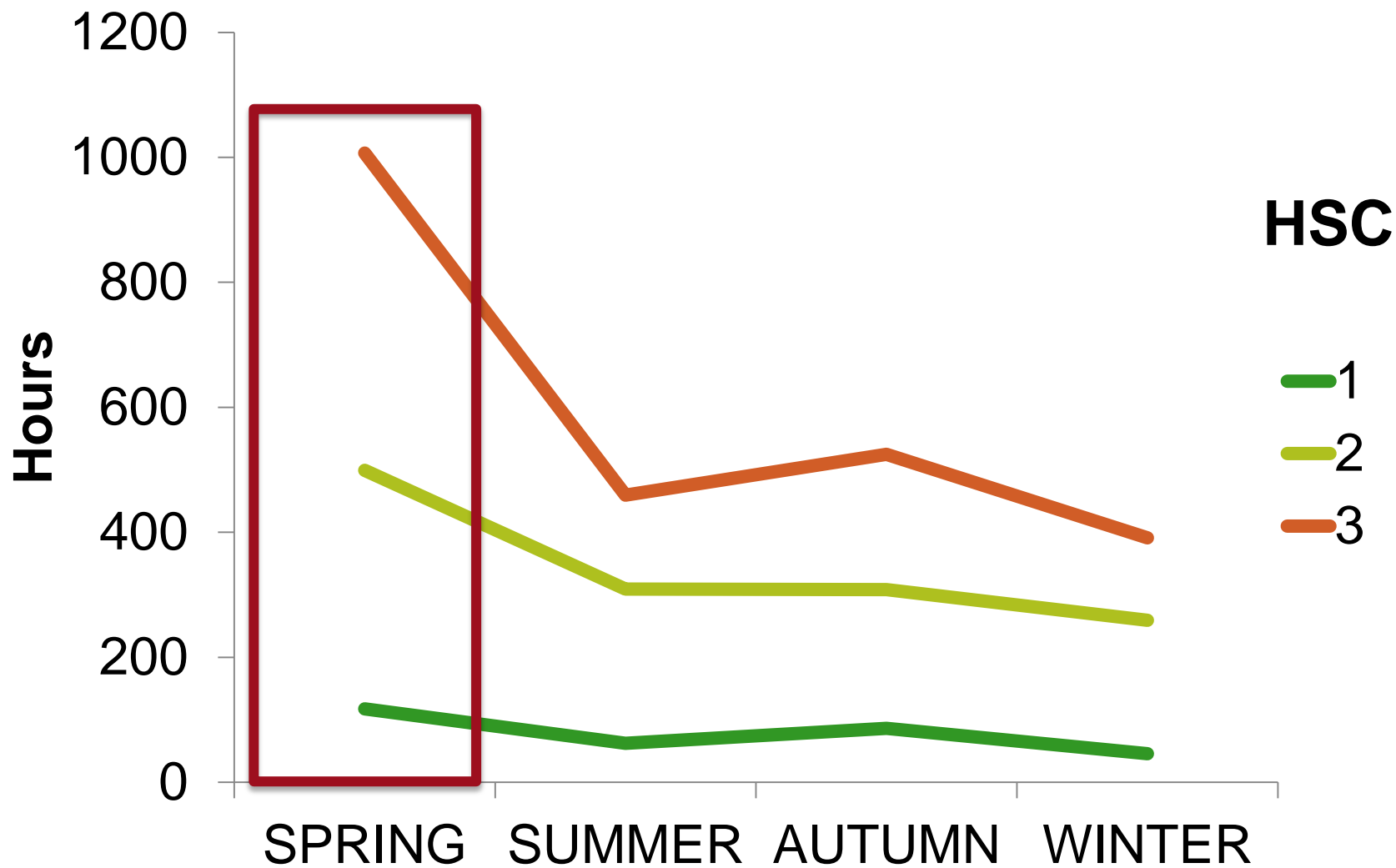
- Longer distance to calf location
- All used individual calf pens
- Calves turned out to grass at 9 wks



Farmer work profile annually

	Herd Size Cat.		
	1	2	3
Start time	07:31	07:13	06:40
Finish time	17:56	17:55	15:27
Length of day (h/day)	10.4	10.7	8.8
Non-farm activity (h/day)	3.0	2.6	2.0
Length of the day excluding non-farm activity (h/day)	7.4	8.1	6.8
Length of the day excluding non-farm activity (h/day) but including lunch break (comparable to non-farming)	8.4	9.1	7.8
Average hours/week over year	50.4	54.6	40.8

Seasonality of hired labour across HSC



Spring = Feb-Apr

Farmer work profile during spring-time

	Herd Size Cat.		
	1	2	3
Start time	07:00	06:43	06:10
Finish time	18:41	18:32	17:33
Length of day (h/day)	11.7	11.8	11.4
Non-farm activity (h/day)	3.1	2.8	2.4
Length of the day excluding non-farm activity (h/day)	8.6	9.0	9.0
Length of the day excluding non-farm activity (h/day) but including lunch break (comparable to non-farming)	9.6	10.0	10.0
Average hours/week over year	62.4	65.0	65.0

Critical spring-time period (Feb-April)

- **Current study - labour efficient farms**
- **Availability of skilled people on a seasonal basis – difficult**
- **Separate spring-time study**
- **Objective: Examine the labour requirements specifically in the spring-time**
 - Devise strategies to reduce the work requirement
 - Economic implications of these strategies

Spring-time labour input to the farm

- The most time-consuming tasks of the spring were:

1. Milking
(5.6 h/d)

2. Calf care
(2.7 h/d)

3. Machinery tasks
(2.0 h/d)



Effect of contracting out tasks in spring on labour requirements

	Farm hours worked per day	Reduction in hours per day from task elimination
	(h)	(h)
Original	16.6	N/A
Milking eliminated	11.0	5.6
Calf care eliminated	13.9	2.7
Machinery work* eliminated	14.6	2.0

*Machinery work includes winter feeding, spreading of fertilizer, lime, slurry, soiled water and farm yard manure, agitating, reseeding, pit silage, spraying, hedge cutting, digger work, and other

Effect of contracting out tasks in spring on farm profitability

	Baseline
Cow numbers	185
MS sold	73,283
Milk receipts	309,037
Total costs	235,271
Net profit	102,891

Effect of contracting out tasks in spring on farm profitability

	Baseline	Contracted milking	Contracted calf rearing	Contracted machinery work
Cow numbers	185	185	185	185
MS sold	73,283	73,283	75,532	73,283
Milk receipts	309,037	309,037	318,348	309,037
Total costs	235,271	235,271	274,508	235,271
Net profit	102,891	100,006	99,644	100,430

You can't manage what you don't measure.....

- The benefits of recording – **Lawrence Sexton**
- Make milking more efficient (1512 hours)
- Calf feeding (598 hours)
 - First 100 heifer calves gone at 2 days old
 - Most bull calves gone at 7 – 10 days
- Herding pre-milking (223 hours)
 - Use of Batt Latch (opens 1.30 pm and 4.30 am)
- Office/business (865 hours)
 - Outsourced payroll
 - Now pay bills/wages through internet banking
 - Use PastureBase much more
- Soiled water and slurry (350 hours)
 - Fully contracted out

Labour saving....



- Collecting yard layout and backing gate
 - Efficient milking routine
 - Sufficient milking units
 - Meal feeders
 - Parlour drafting
 - OAD early lactation
 - 16:8hr milking interval
 - Auto washer
 - Automation
 - OAD calf feeding
 - Group calving pens
 - Simple calf rearing equipment
 - Outdoor calf rearing
 - Calving camera/ night watch person
 - Functioning gates
 - Water heater in calf shed
 - Batch feeding
 - Organised and group calf pens
 - Daytime calving – night time feeding
 - Batch crush
 - Adequate feed space
 - Breeding equipment
 - OAD AI
 - Heat detection and freeze branding
 - DIY AI/ AI technician
 - Roadway infrastructure
 - Underpass
 - Water trough location
 - Spur roadways and strip grazing (spring)
 - Maintained gate handles + entry points
 - Paddocks in 24 – 36 hr grazing
 - Farm office
 - SOPs
 - Office organisation
- ✓ **Contract out machinery/ building work**
 - ✓ **No non-productive animals on GP**
 - Grass based feeding**
 - ✓ **Simple system**
 - ✓ **Adequate infrastructure**

Future work



- Increased focus on measuring labour input
- Better picture of springtime workload – more frequent measures
- Focus on facilities and farm layout
- Focus on efficiency and organization
- Implications of strategies to deal with workload
- Different range of farms
 - Measured in year after quota removal
 - Selected farms (but national database needed)

Take Home Message I

- Is dairy an attractive career?
 - Yes – annual average working day length comparable to other careers
 - Average labour efficiency good at 24.1 h/c/y
 - But.... long hours can occur in spring
- Large range in efficiency within each HSC:
 - Regardless of farm size, high efficiency levels are achievable
 - Importance of good facilities, practices and work organisation
- There are economically viable options to manage labour-intensive spring period

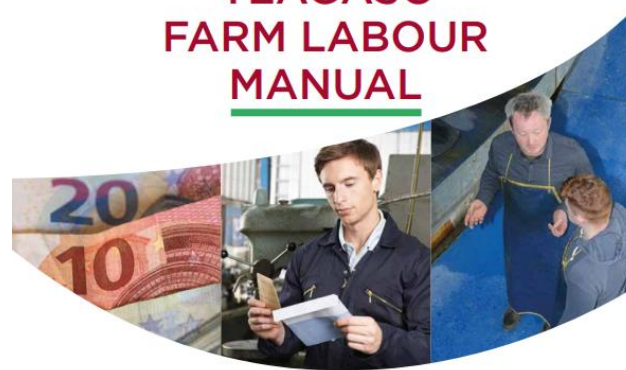
And finally...

- You can increase efficiency in many ways without increasing cost
- There are many options to reducing workload... 'pick n mix' approach
- There is a cumulative benefit to making small changes
- Putting effort into the right things can save you time on the wrong things



Thank you to the
farmers who
provided the data for
this study

TEAGASC FARM LABOUR MANUAL



Best Practice in Recruiting
and Managing Employees



Animal & Grassland
Research and
Innovation Centre
Moorepark

Moorepark Dairy Levy Research Update International Agricultural Workforce Conference

Radisson Blue Hotel, Cork

Tuesday 10th July, 2018

Series 36



Thank you for your
attention