

Update of Economic Values



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ICBF Industry Meeting, Portlaoise. 22 May 2015

Objective

- To put a value on gains in farm productivity

✓ Level of improvement in productivity



To assign economic values to the breeding traits that affect profitability so that breeding indexes can accurately reflect economic gains made on farms

Updates since last review

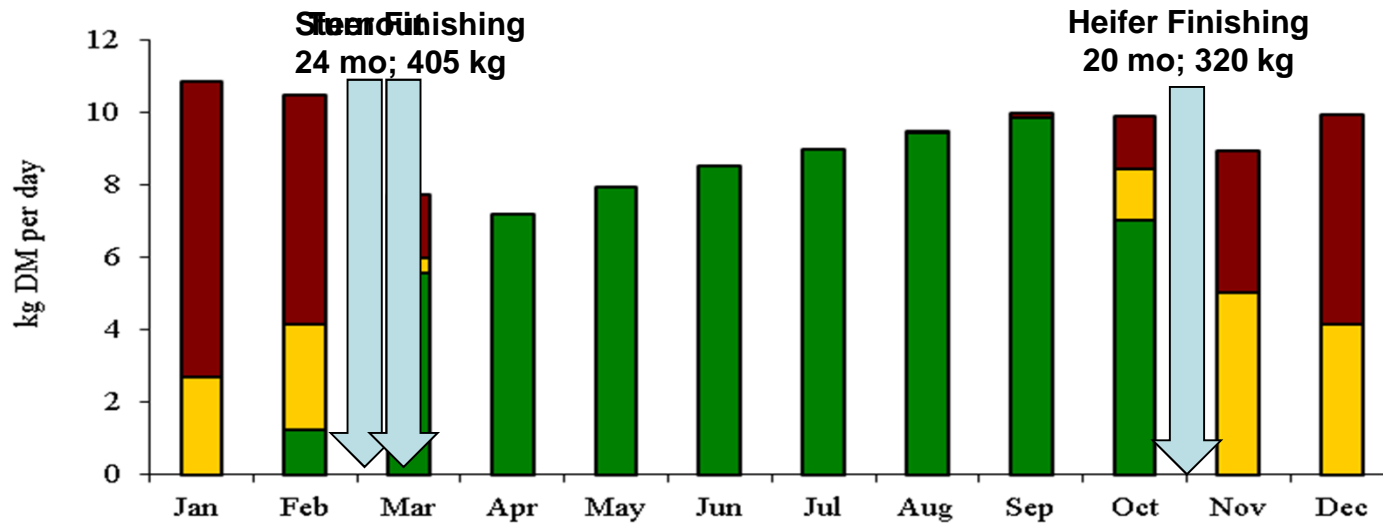
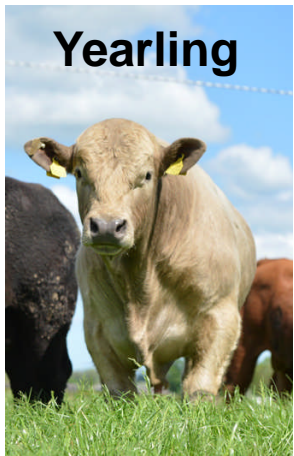
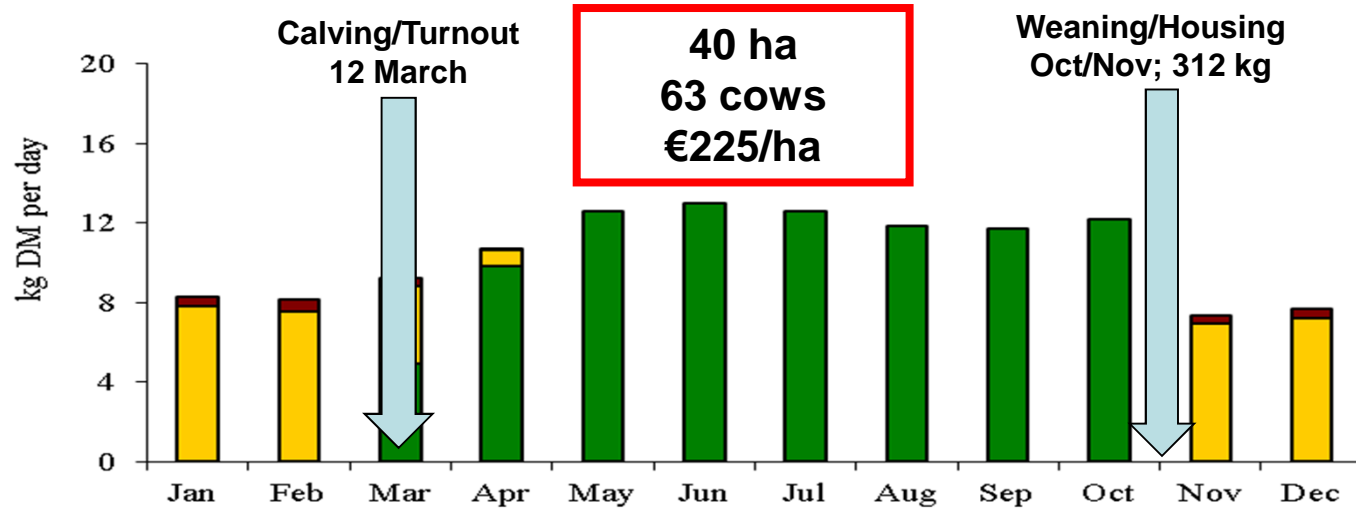
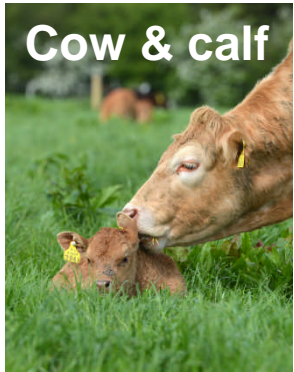
- Prices

	2012	2015	Source
Mean R3 steer price (€/kg)	3.78	4.00	FAPRI
Labour – general (€/hr)	18.51	11.29	JLC
Labour – stockmanship (€/hr)	18.51	18.51	FRS
Concentrate (€/t)	255	300	FAPRI
CAN (€/t)	306	260	FAPRI
GDP deflator	18%	21%	FAPRI

- Model (Grange Beef Systems Model)

	2012	2015
Mean calving date	3 March	12 March
Cow live weight (kg)	610	670
Replacement heifer (€)	2038	1796
Stocking rate (LU/ha)	2.75	2.60

Baseline System



Output traits

1. Weight for age (kg carcass weight)
2. Maternal weaning weight (milk effect)



Output traits

1. **Weight for age (kg carcass weight) = €4.03/kg carcass**
2. **Maternal weaning weight (milk effect)**



Maternal Weaning Weight

Example for 50 kg heavier calf



Economic Value of maternal weaning weight = $(147 - 20) / 50 = €2.53/\text{kg}$

Production cost traits

1. Progeny intake
2. Cow mature weight
 - Heifer intake
 - Cow intake
 - Cull value
3. Gestation length
4. Calving difficulty

Progeny Intake

Extra feed costs for heavier animals



X 63%

Average annual feed cost = 13 c/kg



X 28%

i.e. each extra kg of feed required by cattle costs 13 c



X 9%

Production cost traits

1. Progeny intake

€0.13/kg DM

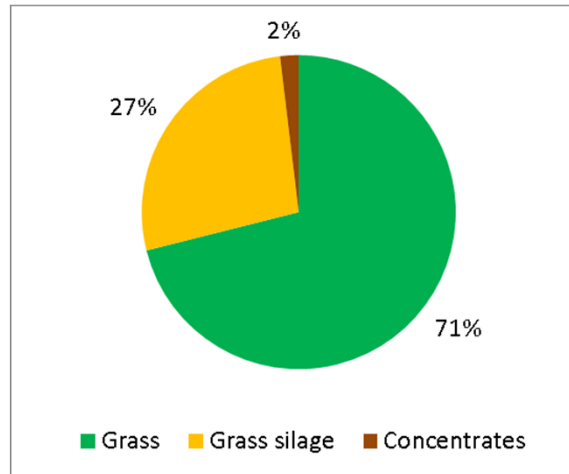
2. Cow mature weight

- Heifer intake
- Cow intake
- Cull value

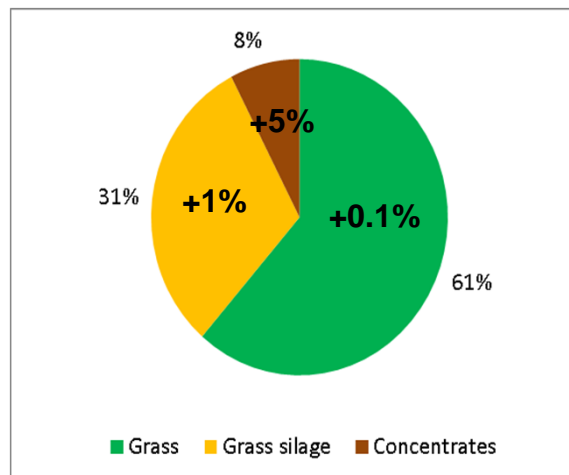
3. Gestation length

4. Calving difficulty

Cow & Heifer Intake EVs



€114/t DM



€134/t DM

Production cost traits

1. Progeny intake = -€0.13

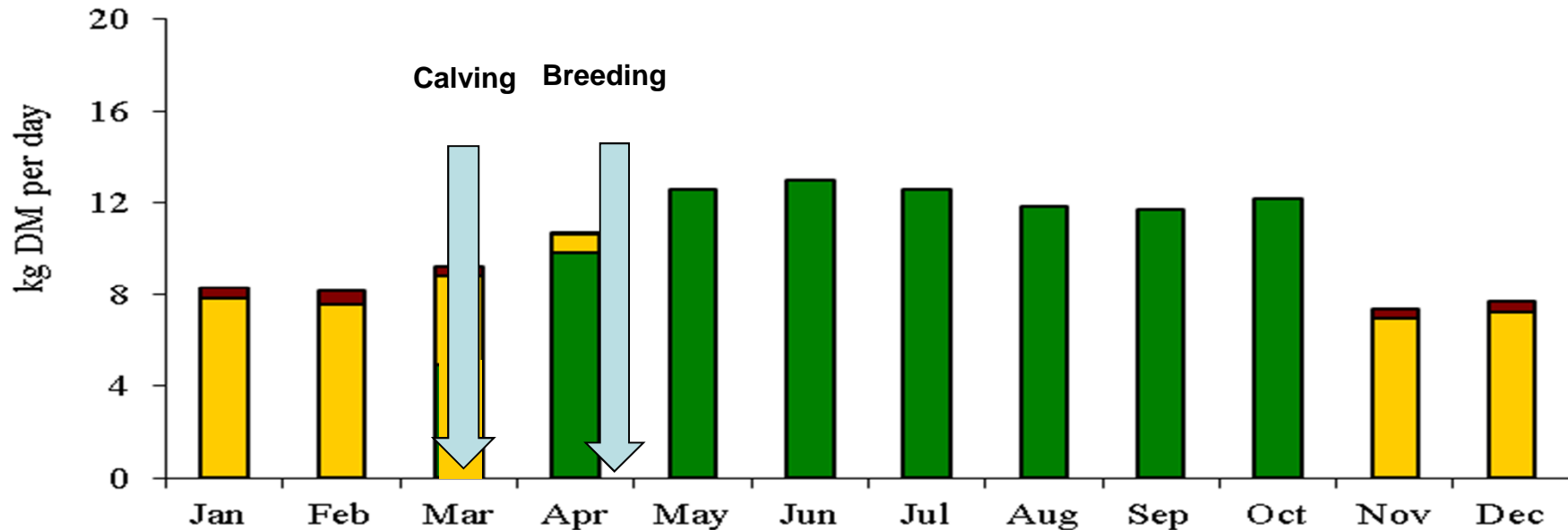
2. Cow mature weight

- Heifer intake (per kg DM) = -€0.276
- Cow intake (per kg DM) = -€0.100
- Cull value (per kg carcass) = €3.15

3. Gestation length

4. Calving difficulty

Gestation Length



- Fewer days until breeding - higher replacement rate
- Less grazed grass, more grass silage
- Lighter weanlings – lower carcass weights (but less feed)
- Economic Value = €2.25 per day change in GL

Calving difficulty

- **Direct calving difficulty**

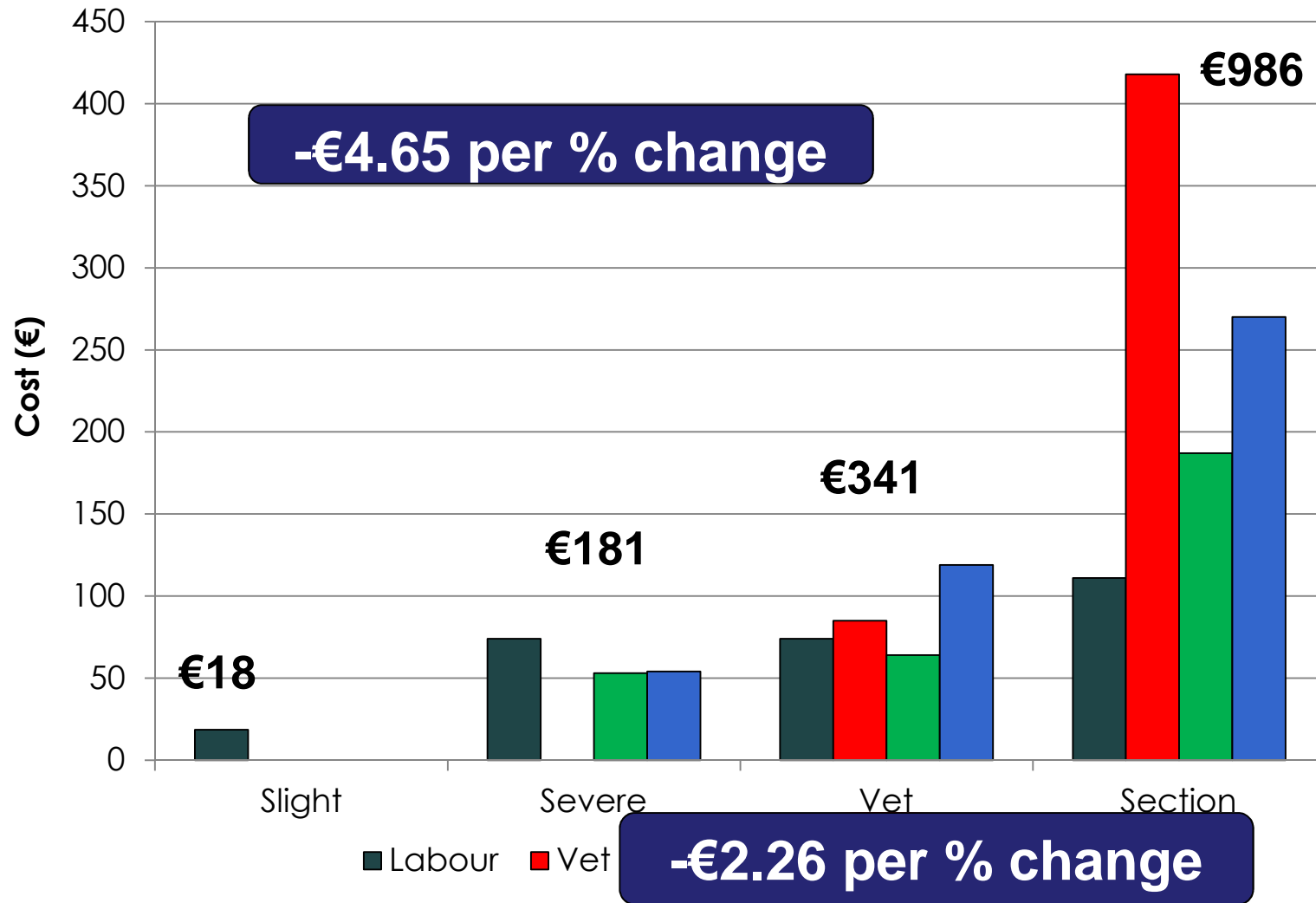
Level of difficulty because of the characteristics of the calf
(body shape and size, etc.)

- **Maternal calving difficulty**

Level of difficulty because of the characteristics of the cow
giving birth (pelvic size, calving ability, etc.)

- **Both assessed along a continuum from no assistance to caesarean**

Direct calving difficulty



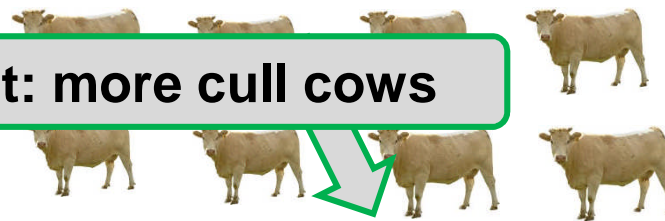
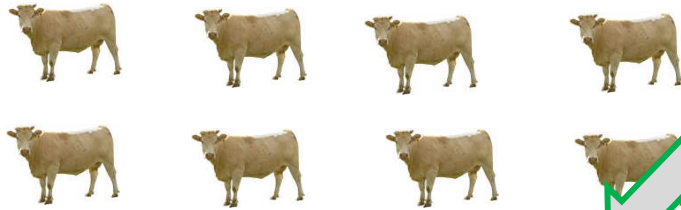
Fertility traits

1. Survival
2. Calving interval
3. Age at first calving

Cow survival

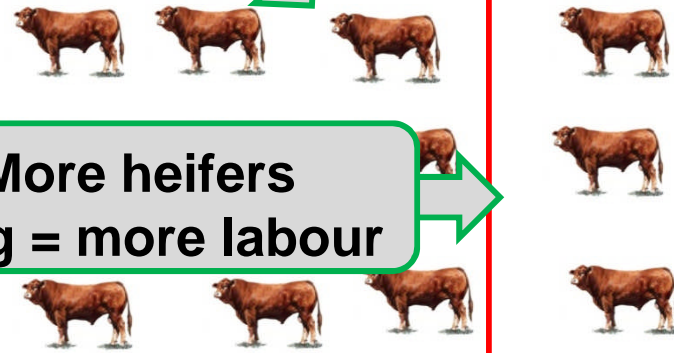
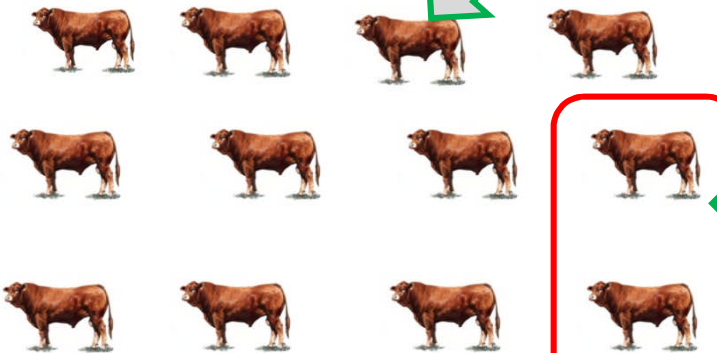
16% replacement rate

25% replacement rate

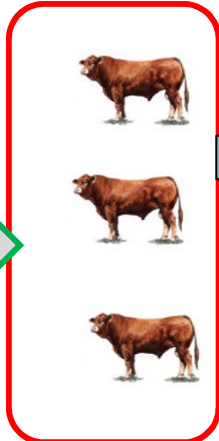


3. But: more cull cows

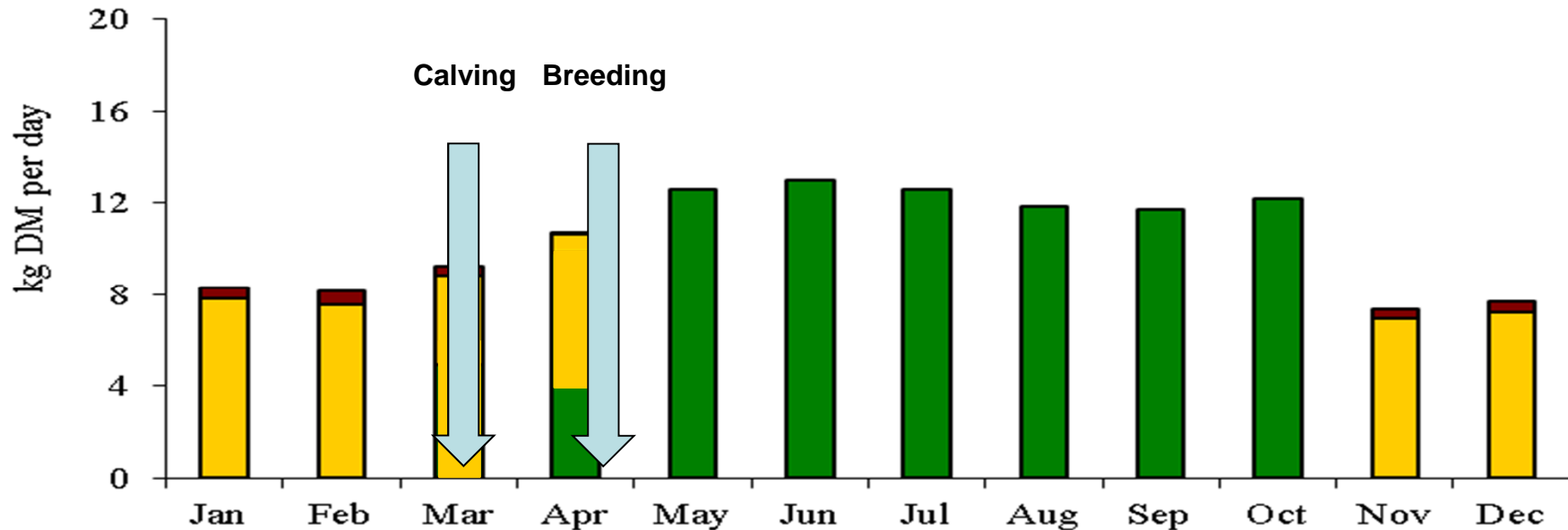
Economic value = €4.02 per head per % change



2. More heifers calving = more labour

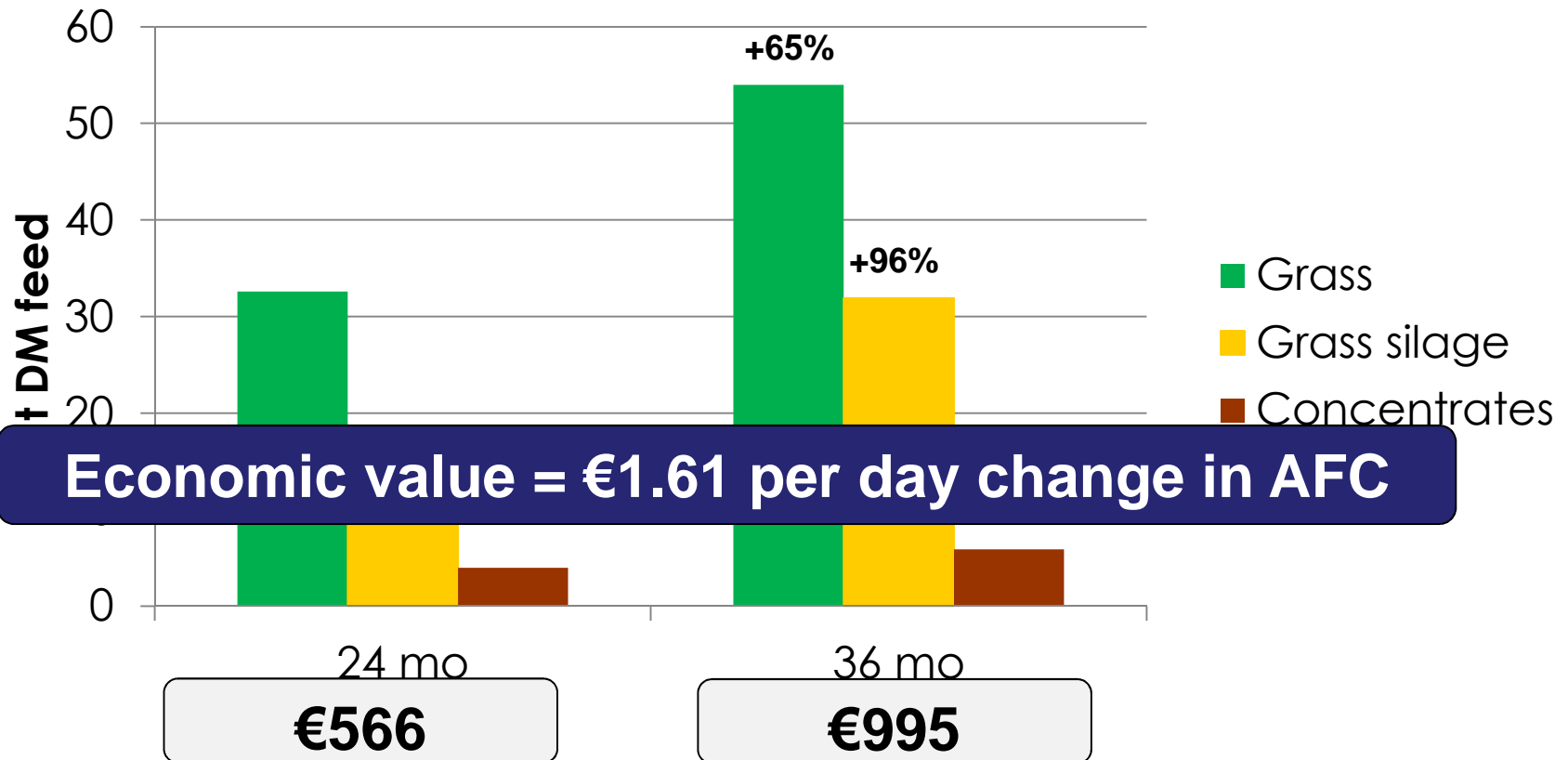
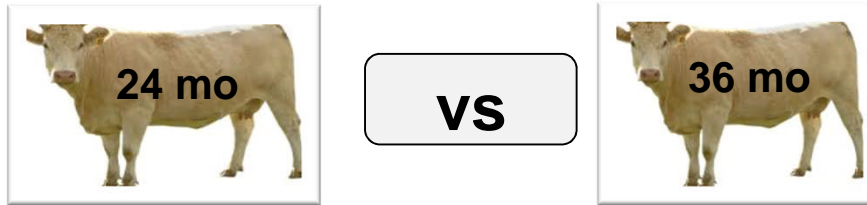


Calving Interval



- Less grazed grass, more grass silage
- Lighter weanlings – lower carcass weights (but less feed)
- Economic Value = €2.31 per day change in Calving Interval

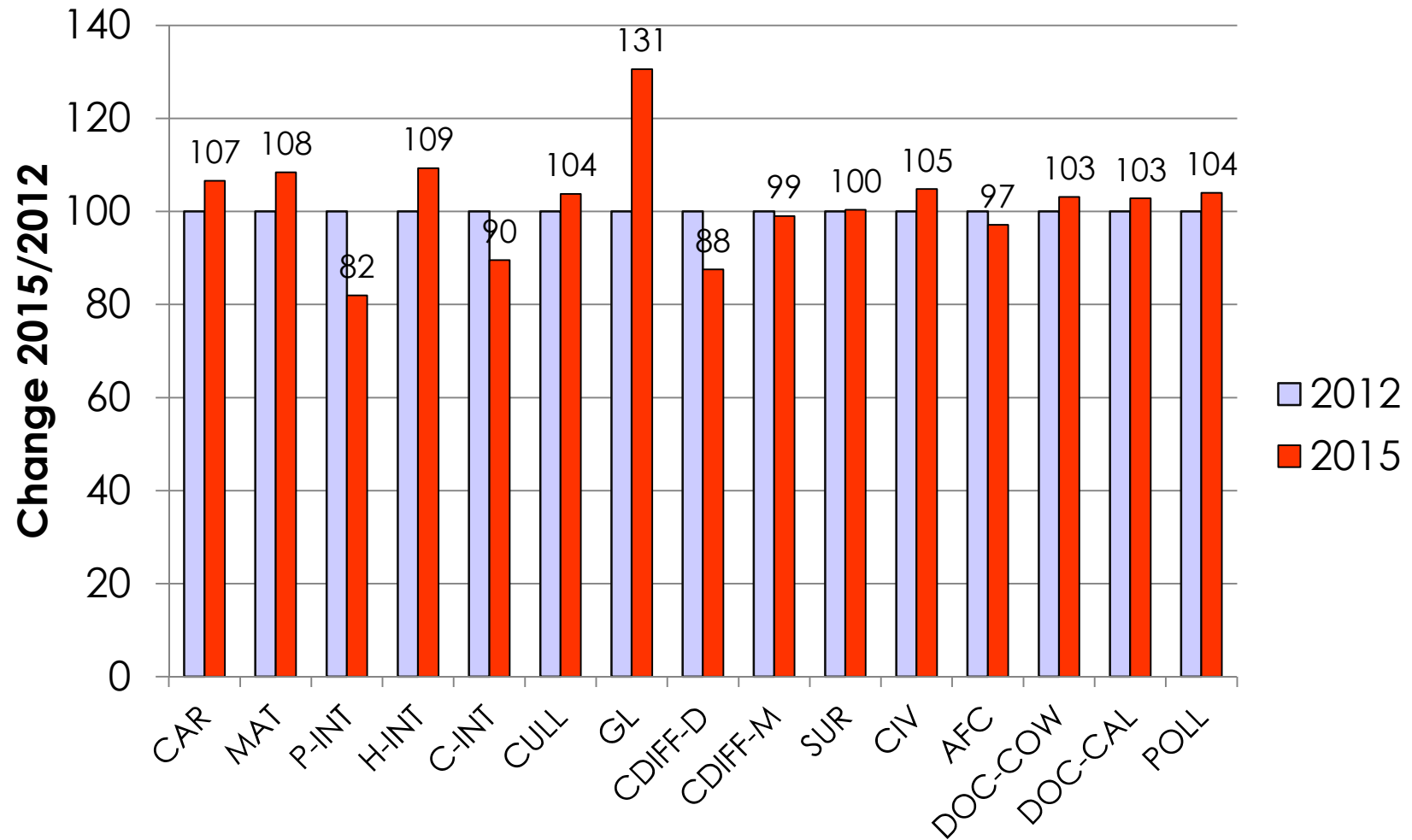
Age at First Calving



Other traits

- **Docility (days off work + injury cost)**
 - Cow €34.00 to €35.06 per unit change in docility score
 - Calf €18.40 to €18.92 per unit change in docility score
- **Disbudding (crate + labour + anaesthetic)**
 - €7.95 to €8.28 per polled progeny
- **HE/AA premium**
 - Industry data - number receiving premium increased from 10% to 75%
 - €6.30 to €31.71 per progeny from HE/AA sires

Revised EVs



Thank you

