

Profitable Dairy Calf to Beef Production Systems



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Teagasc Grange & Johnstown Castle, Dunsany, Co. Meath,
IGA Beef Conference, Rustic Inn Hotel, 30th June 2015.**

BACKGROUND

■ Dairy expansion

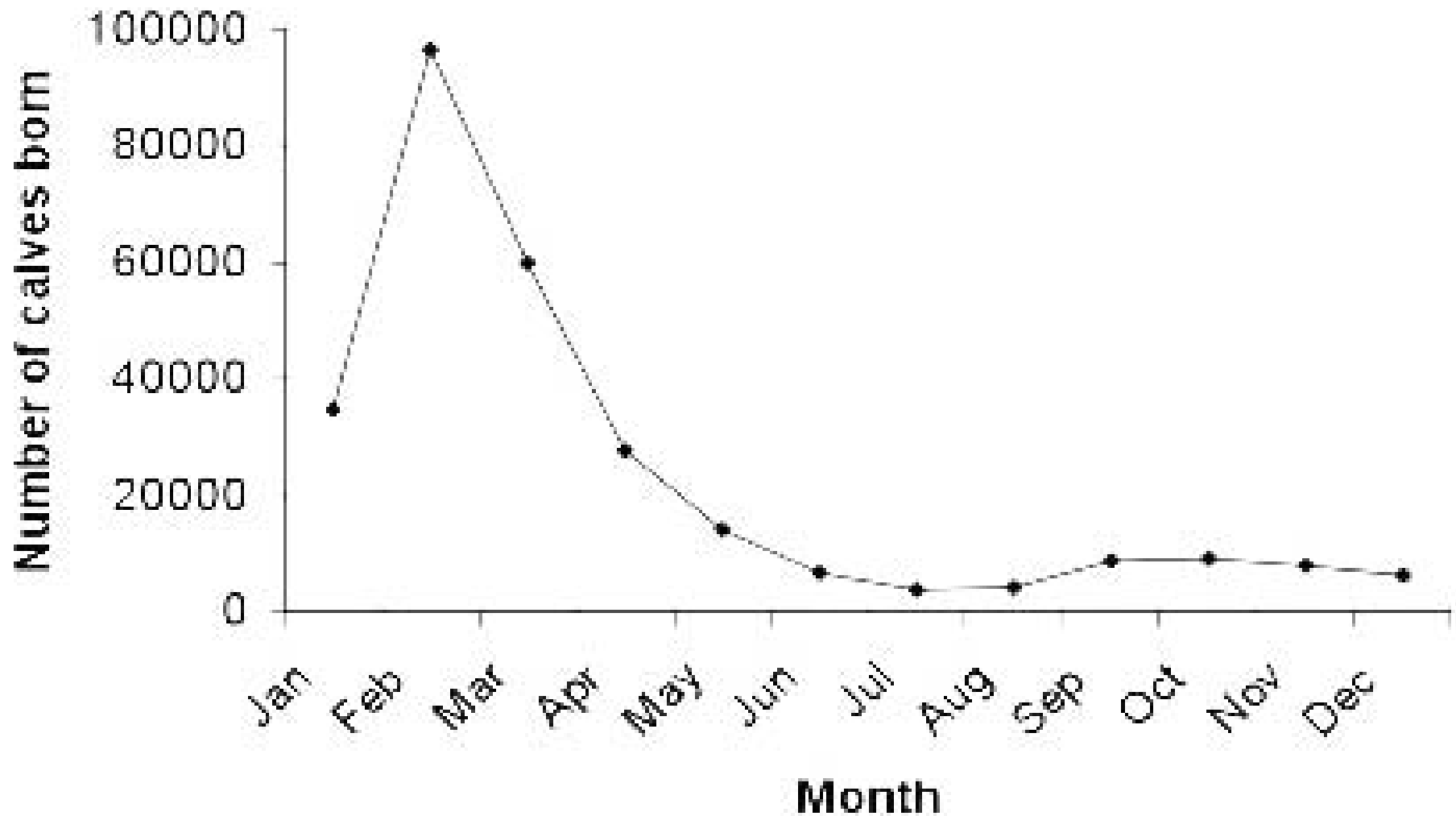
- Abolishment of milk quotas
- 50% increase in milk production (Food Harvest 2020)
- Increase in the proportion of dairy calves

■ Dairy calf to beef blueprint systems

- Traditionally 2 year old steer production systems
- Early maturing heifer systems ➡ **pasture finish**
- Late maturing heifer systems ➡ **indoor finishing**
- Increasing interest in bull beef production (Bord Bia, 2014)



Calving Profile of Dairy Cows

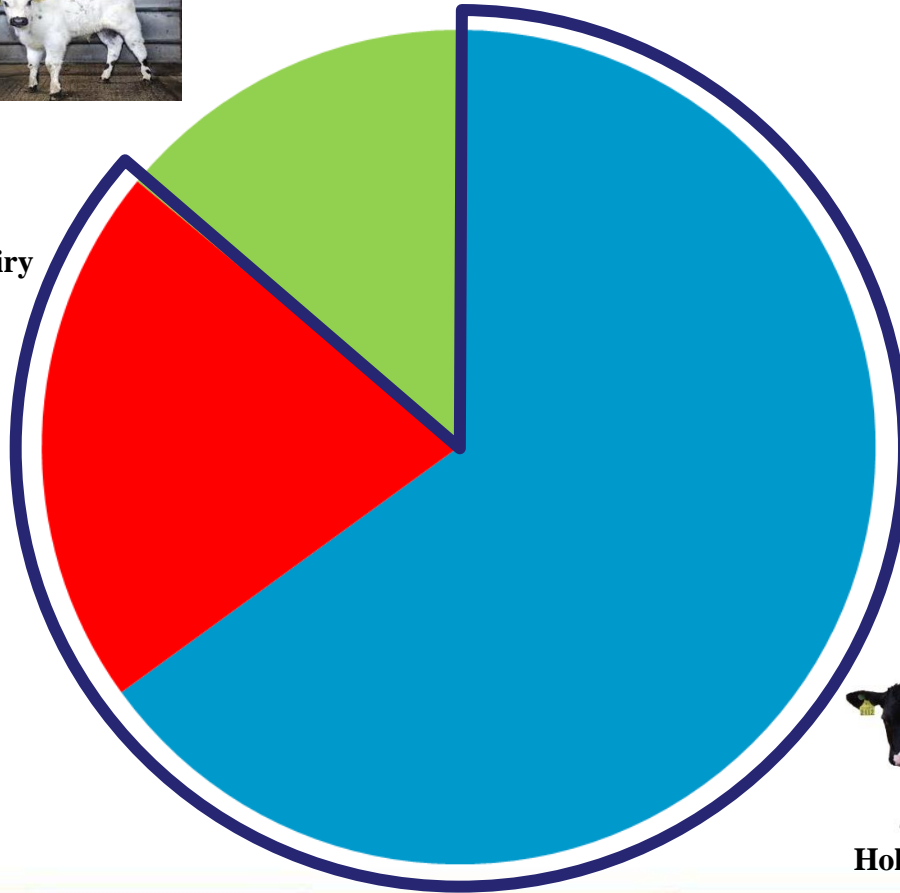


Profile of sire breeds used on the Irish dairy herd

Late maturing dairy cross (14%)



Early maturing dairy cross (21%)



Holstein-Friesian (65%)

AIM, 2013

Establishing a production system(s)

1. What to buy?

- a. Male dairy calves
- b. Early maturing heifers or steers
- c. Late maturing heifers and steers
- d. Autumn born calves



2. How many to buy?

- a. Know how much grass is grown on the farm
- b. Establish the stock carrying capacity of the farm



Male Dairy Calf to Beef Production



15 month bull system



19 month bull system



21 month steer system



24 month steer system

Steer Production Systems

24 month steer system



- Pasture grazed 1st season
- Housed in winter
- 2nd season on pasture
- Concentrate input during finish: 550 kg
- Carcass weight = 320 kg

Finishing 2.5 per hectare

21 month steer system



- Pasture grazed 1st season
- Housed in winter
- 2nd season on pasture
- Concentrate input during finish: 300 kg
- Carcass weight = 280 kg

Finishing 3.0 per hectare

Blueprints for Bull Production Systems

15 month bull system



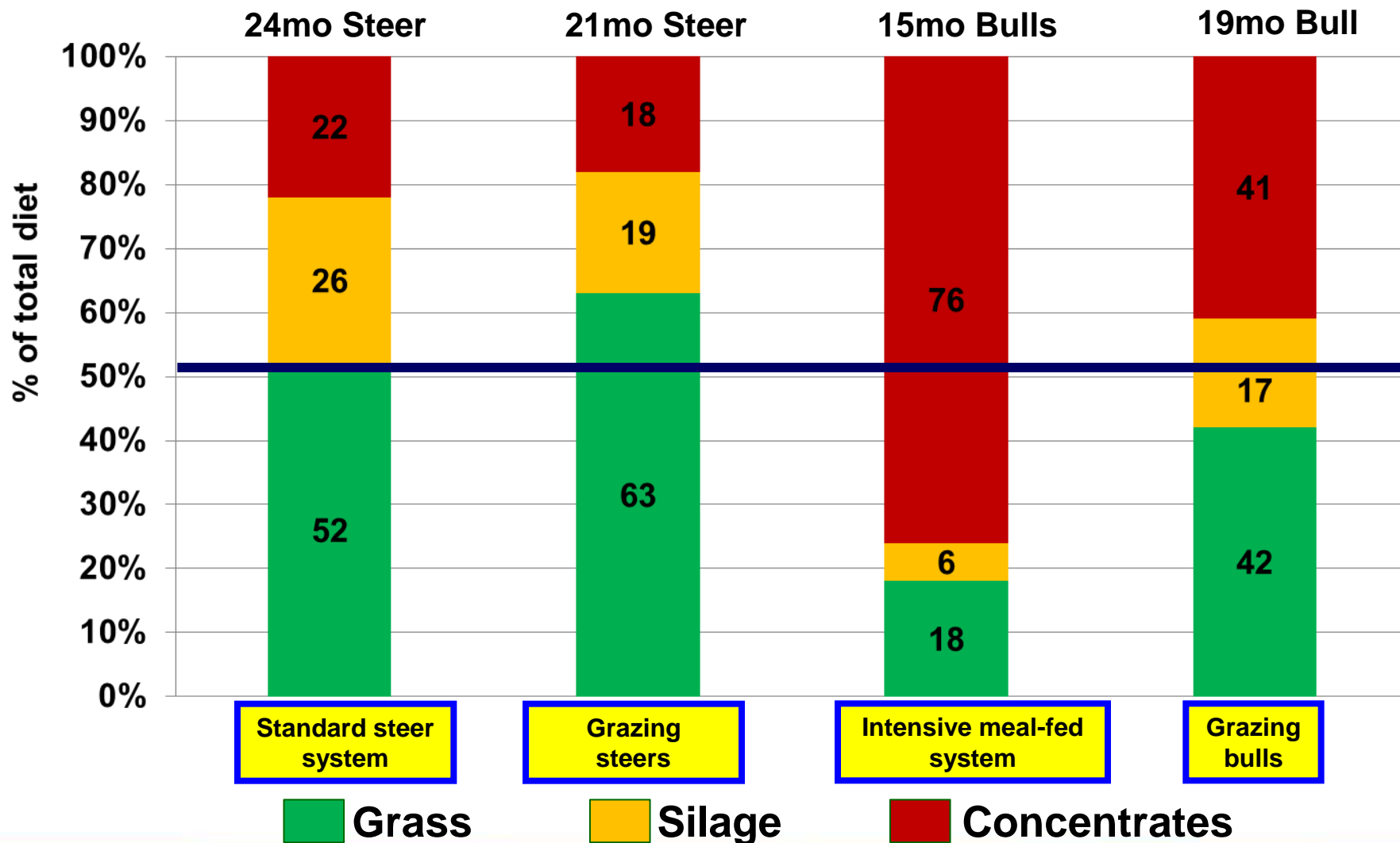
- Pasture grown for 1st season
- House November
- Ad lib feed finishing (until May/June)
- Concentrate input during finish: 1.8 t
- Target carcass weight = 275 kg

19 month bull system

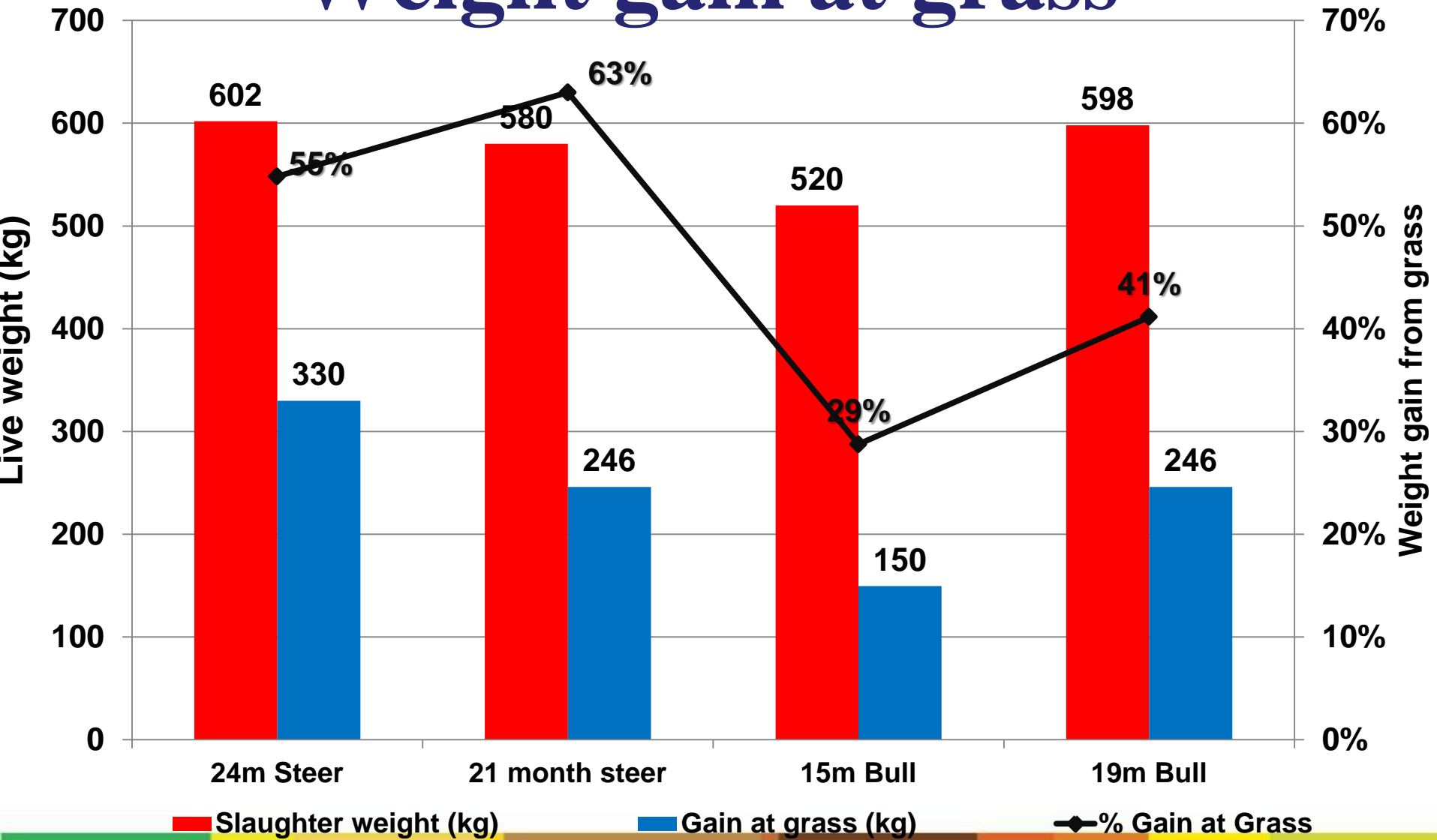


- Pasture grown for 1st season
- Store winter
- 1st season grass & 100 day ad-lib finish
- Concentrate input during finish: 1.2 t
- Carcass weight = 320 kg

Feed Budget



Weight gain at grass



24 month HF Steer System

€75



2.5 / ha.



€255/ton

Variable
Costs

€700



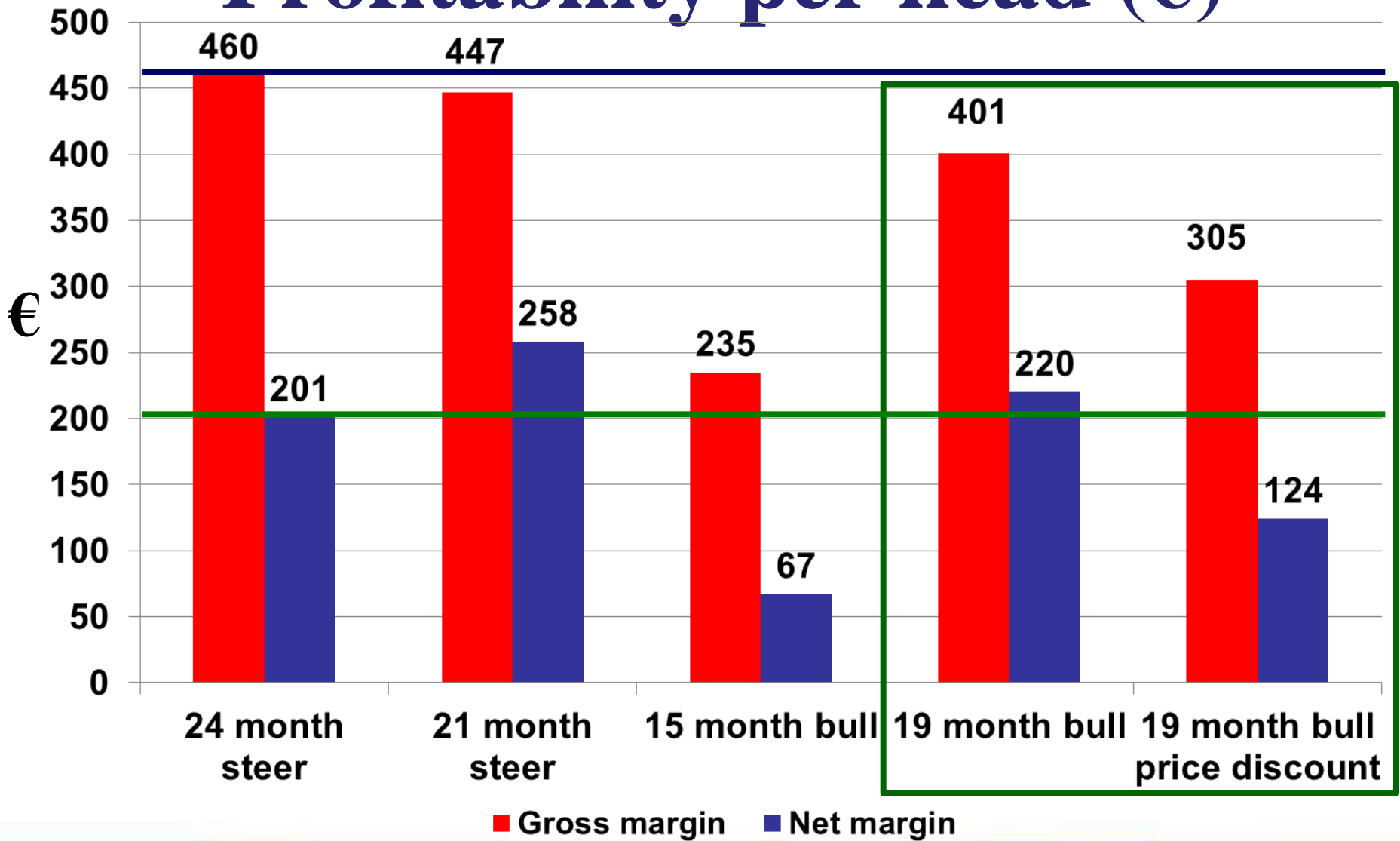
Gross Margin
Per Head = €460

Net Margin
Per Hd. = €201

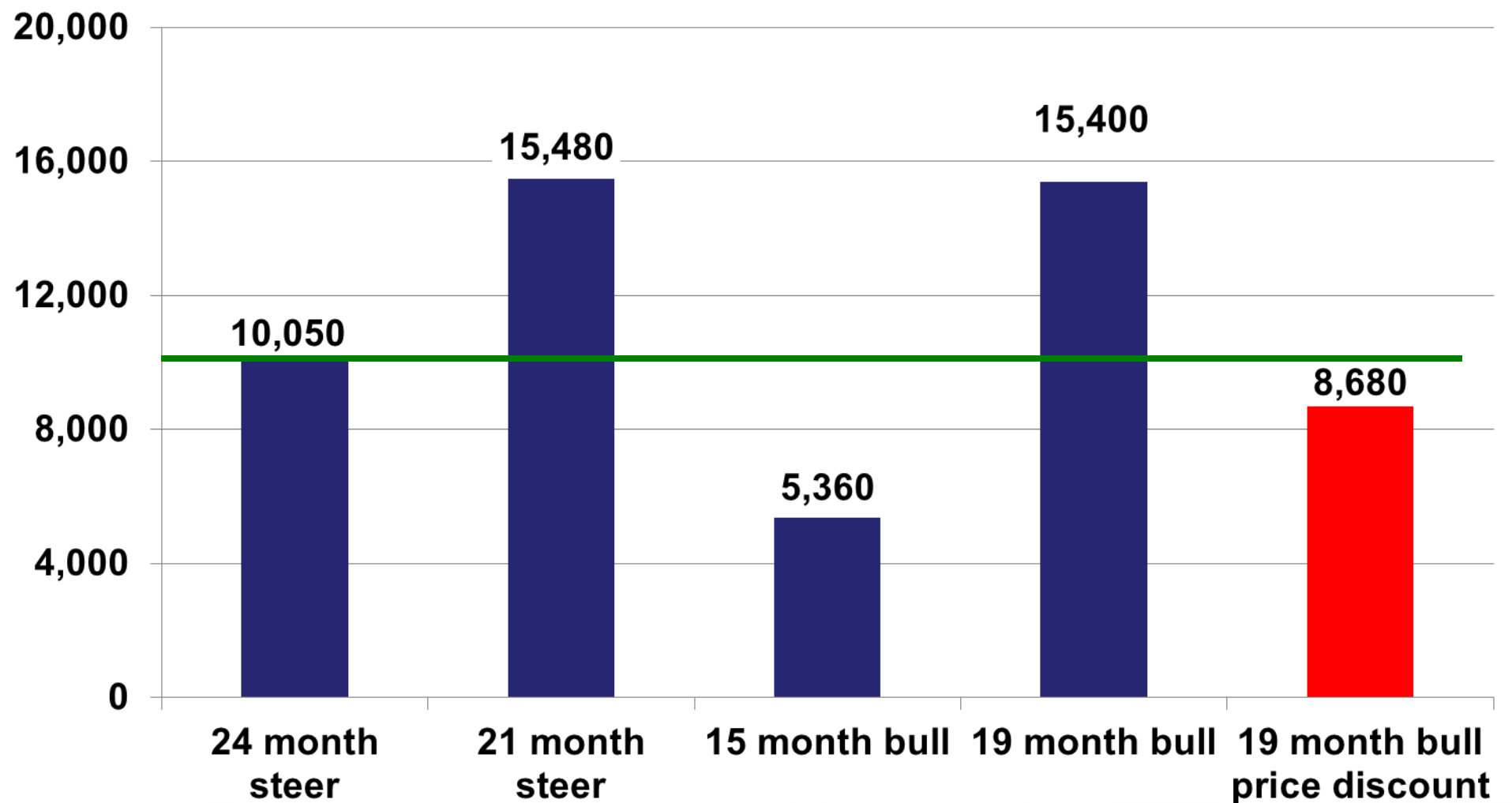
€3.87 / kg

€1,238

Profitability per head (€)



Net margin on a 20 hectare farm (€)



Early maturing beef from the dairy herd



Early Maturing Production Systems

- **Plentiful supply of calves**
 - Easy calving short gestation traits
- **Focused on low input production systems**
 - 1st season at pasture
 - 'Stored' through the first winter
 - 2nd season at pasture
 - Slaughtered off pasture/ short finishing period



Early Maturing Dairy Cross Heifer

- Slaughtered from Sept - Nov
- Concentrate input during finish: 150 kg
- Carcass weight = 235-245 kg
- Conformation score: 0-
- Fat score: 3-

Finishing 3.5 per hectare



Early Maturing Steer Systems



21 month system

- Pasture grazed for 1st season
- 2nd season at pasture
- Slaughtered in Oct/ Nov
- Concentrate input during finish: 150 kg
- Carcass weight = 280 kg

23 month system

- Pasture grazed for 1st season
- Housing in November
- 2nd season at pasture
- Concentrate input during finish: 450 kg
- Carcass weight = 300 kg

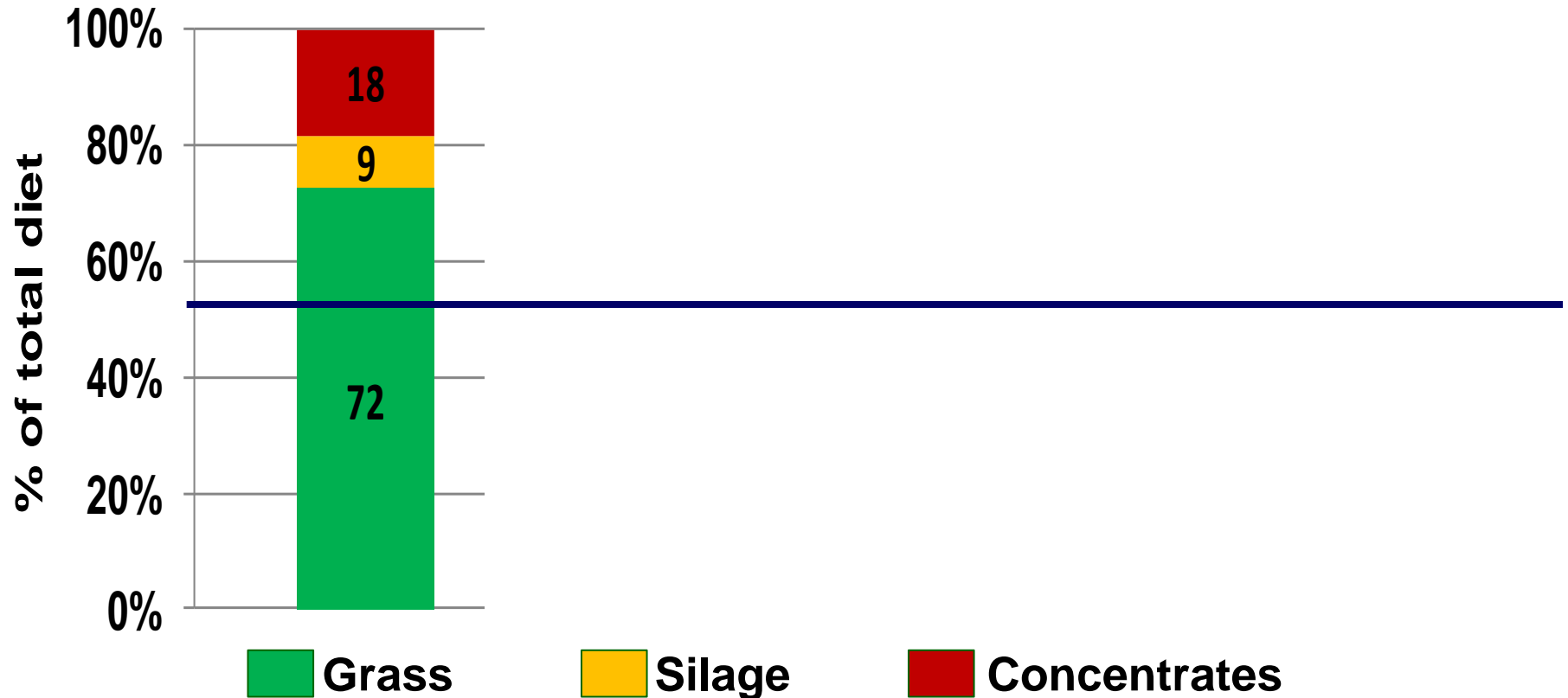
26 month system

- Pasture grazed for 1st season
- Housing in November
- 2nd season at pasture
- Concentrate input during finish: 0 kg
- Carcass weight = 320 kg

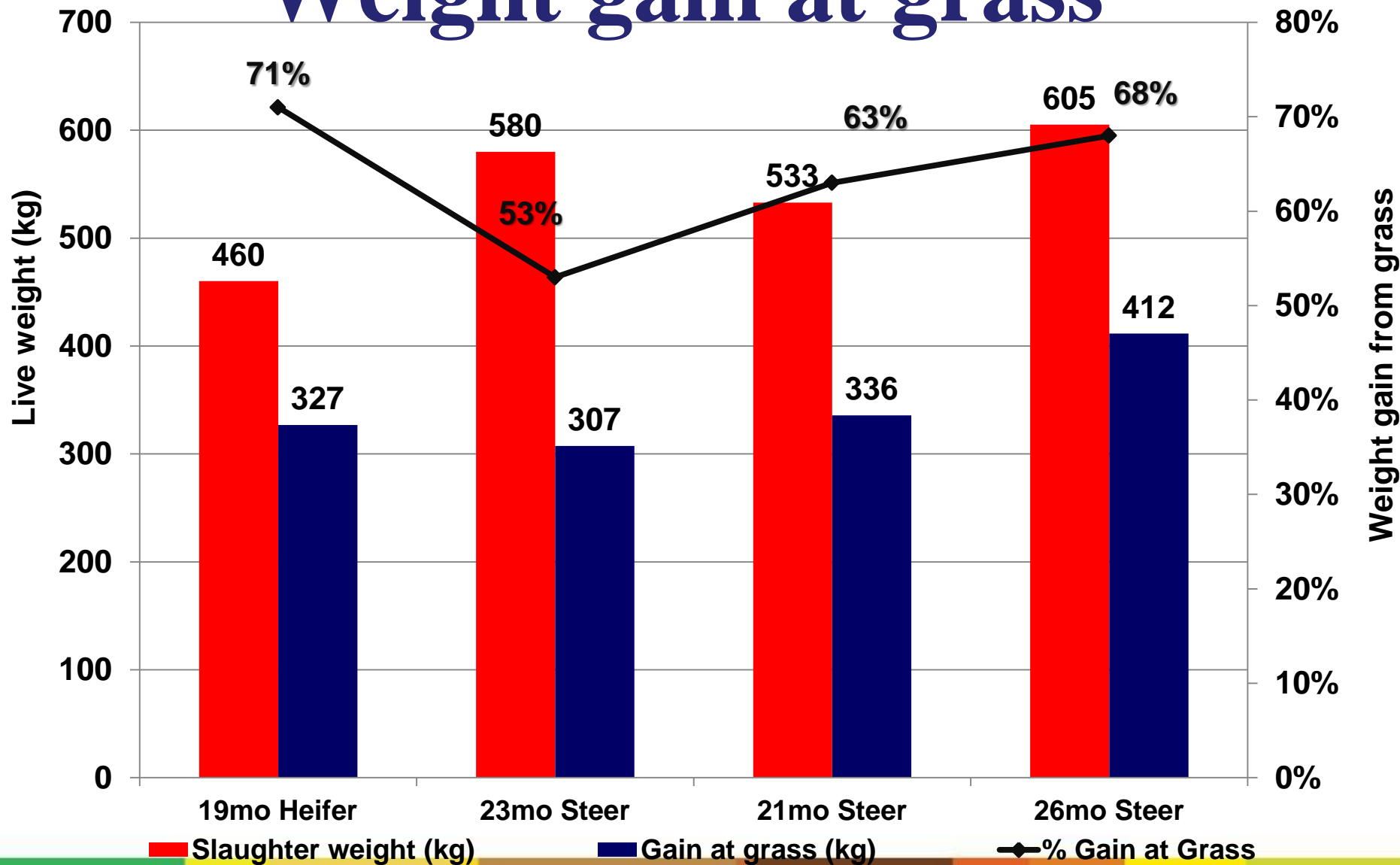
Feed Budget

1. 19mo Heifers

Finished at grass –
Sept to Nov



Weight gain at grass



SPRING BORN HEIFER

€240



19-21 month Heifer Beef



€255/ton

Variable
Costs
€409



Gross Margin Per Head = €339 Net Margin Per Hd. = €177

€4.22 / kg
€992

SPRING BORN STEERS

€270



23 month Steer Beef



€255/ton

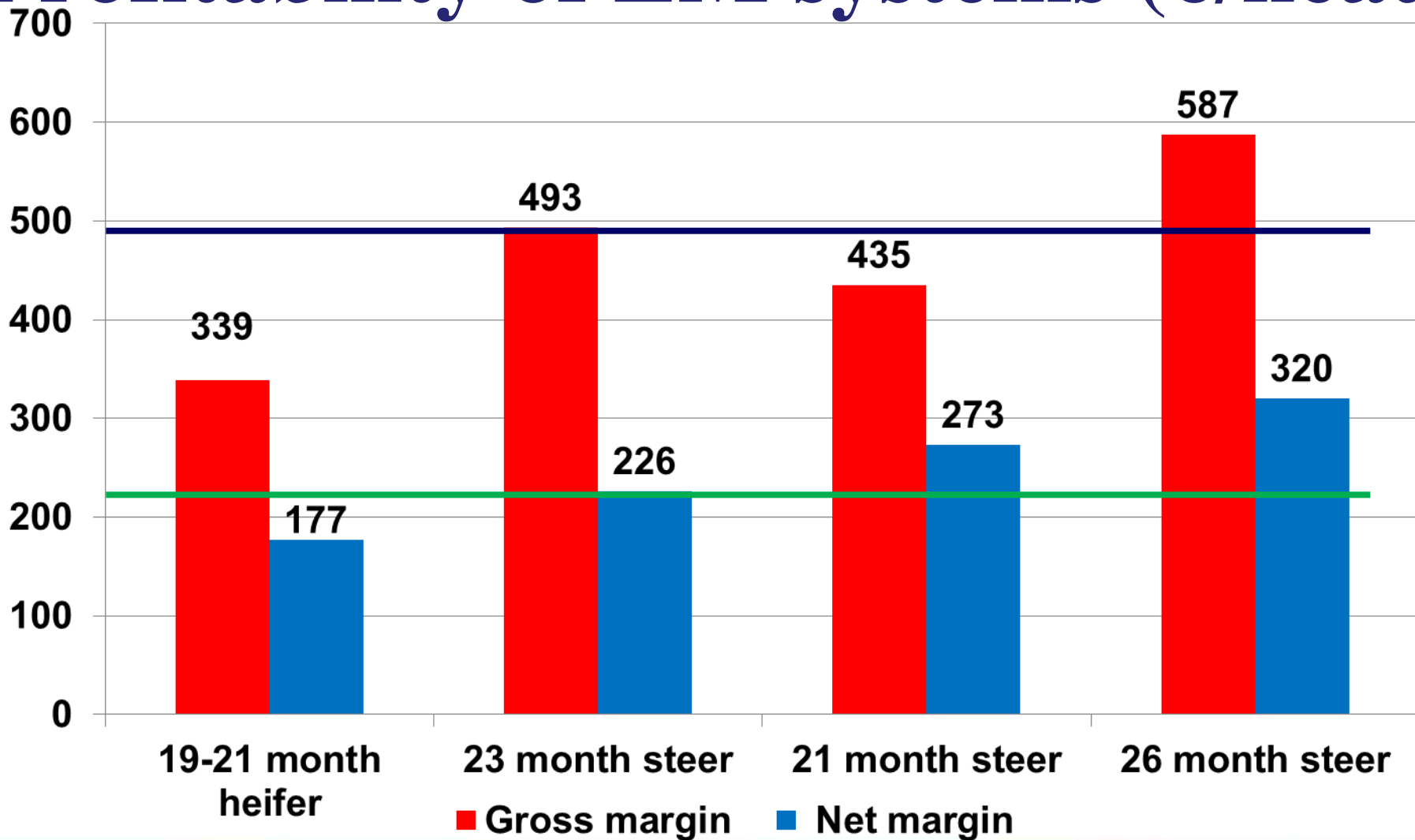
Variable
Costs
€386



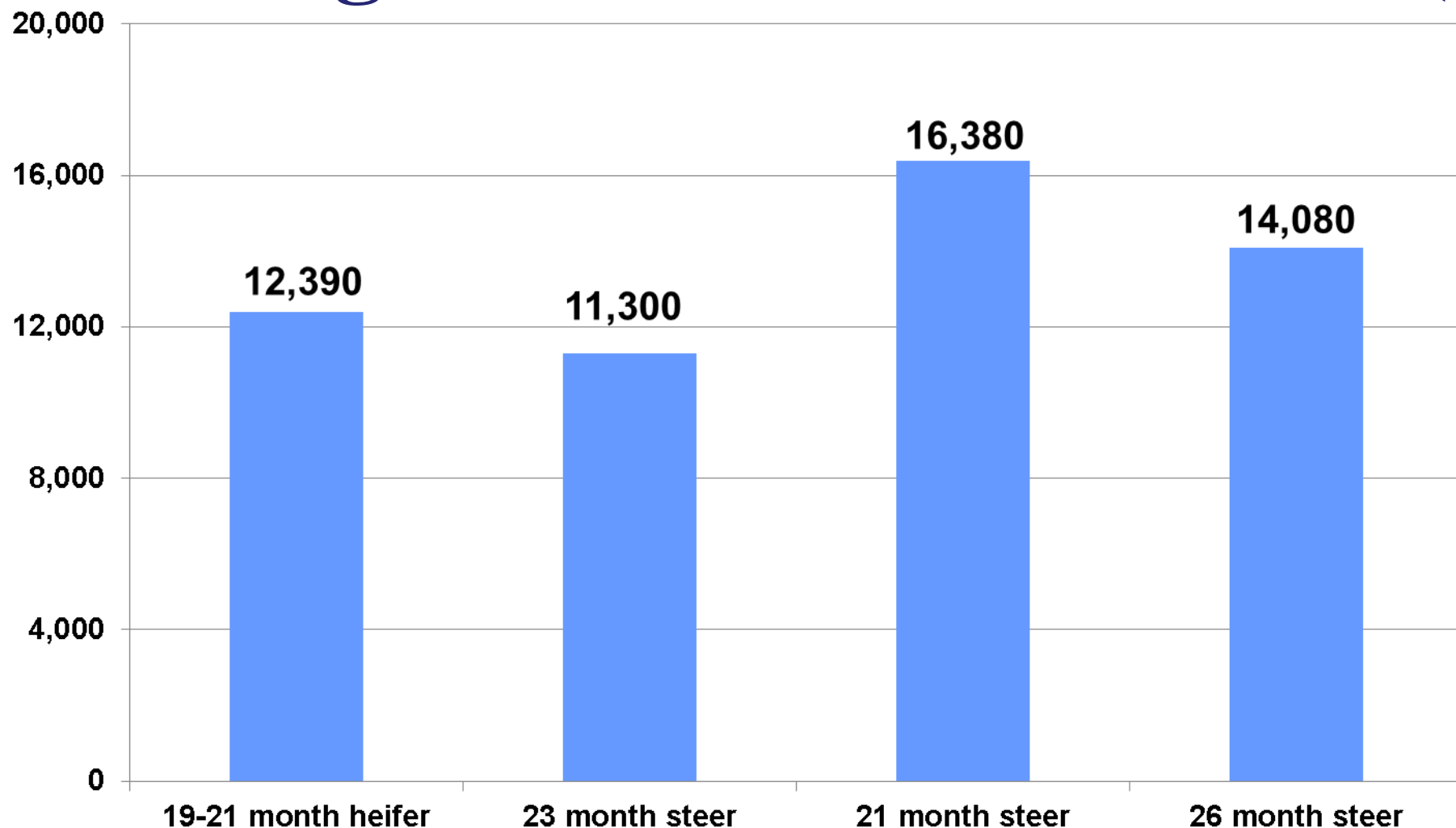
Gross Margin Per Head = €493 Net Margin Per Hd. = €226

€4.37 / kg
€1,346

Profitability of EM systems (€/head)



Net margin on a 20 hectare farm (€)

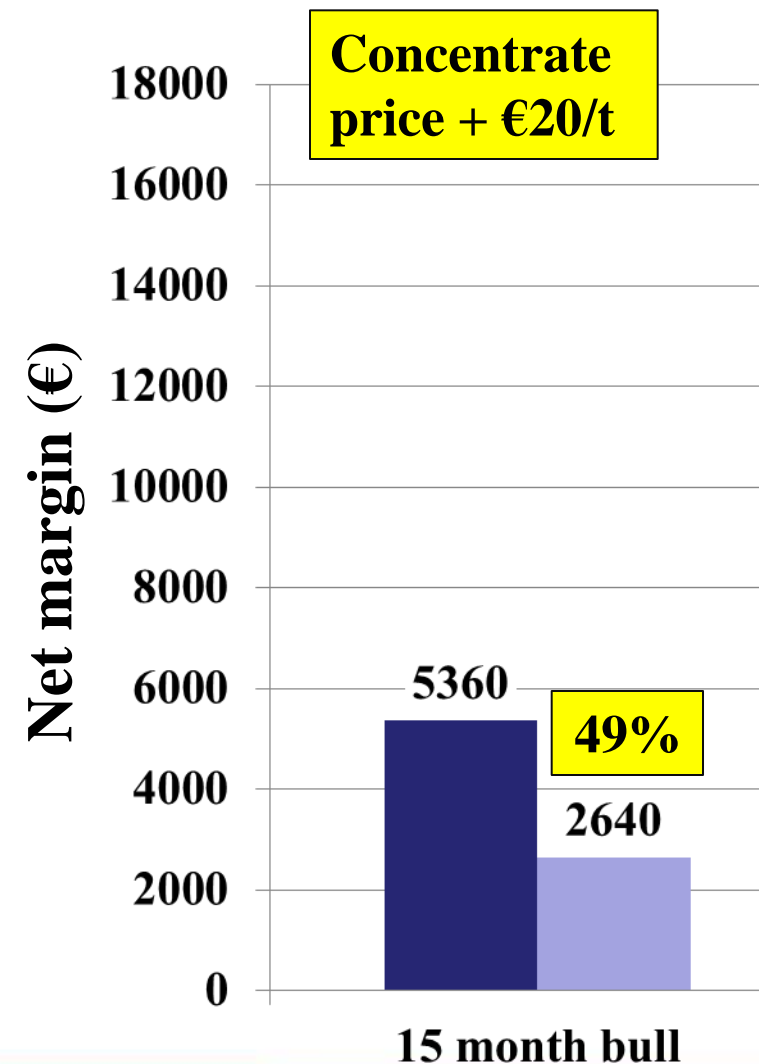


Risk Factors

- **Dairy bulls:**
 - **Market availability/ price discounts**
 - **Concentrate price**
- **Beef price**
- **Calf price**
- **Stocking rate**
- **Animal health**



Sensitivity Analysis on a 20 ha farm



Take home messages

- **Decide and set targets for the system(s)**
 - **Match to farm circumstances**
 - **Potential to be profitable – management critical**
- **Set a ceiling for calf price**
- **Establish systems that optimise animal performance and utilise high levels of grazed herbage**
- **Focus on output per hectare from pasture based systems**

THANK YOU

