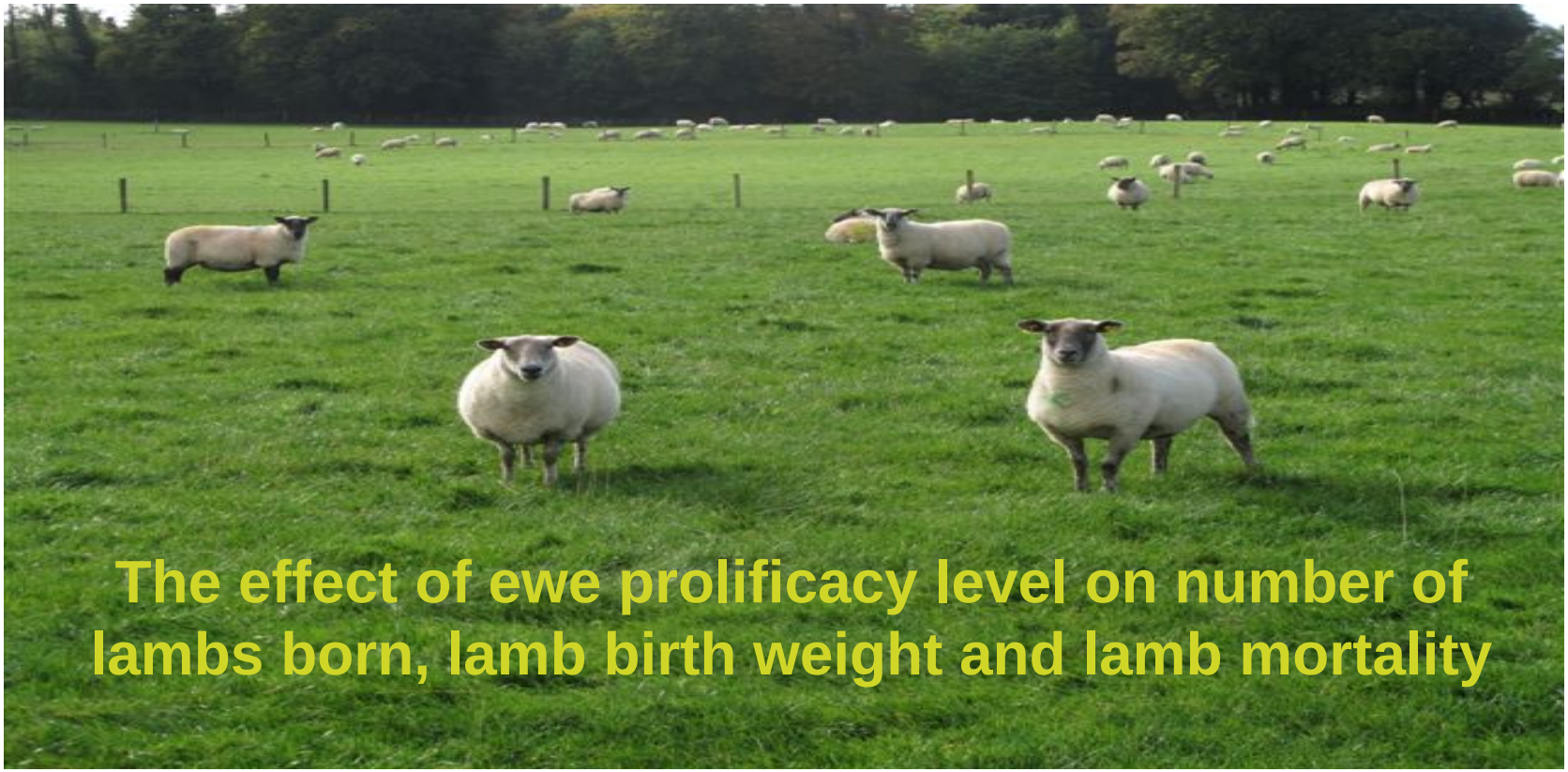

The effect of ewe prolificacy level on number of lambs born, lamb birth weight and lamb mortality

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Overview

- Introduction
- Objective
- Materials and Methods
- Results
- Potential system output
- Potential system profitability
- Conclusions

Introduction

- Grass based lamb production systems
  - Challenge
    - Increase output of lamb
- Two most important factors
  - Stocking Rate
  - Ewe Prolificacy
- Teagasc Roadmap targets
  - SR – 13 ewes/ha
  - Weaning 1.8 lambs/ewe

Objective

To investigate the effect of ewe prolificacy level on the number of lambs born, lamb birth weight and lamb mortality

Materials and Methods

- Two groups of primiparous two tooth ewes were assembled
  - 180 animals in each group
  - Medium prolific group –Suffolk x ewes (MP)
  - High prolific group – Belclare x ewes (HP)
    - Up to 0.3 lamb/ewe difference (Hanrahan 1994)

Materials and Methods

- Data Analysis
  - Analysis of variance using proc GLM SAS
  - Odds ratios also calculated using proc Genmod
  - Odds ratios derived by acquiring the exponent of the partial regression co-efficients
  - Odds ratio greater than 1 implies increased likelihood of an outcome

Results
Lambs born/ewe

- Prolificacy group significant effect (P<0.05) on number of lambs born/ewe
  - 1.80 HP
  - 1.66 MP

- HP group 1.83 times higher likelihood of having greater number of lambs than MP group

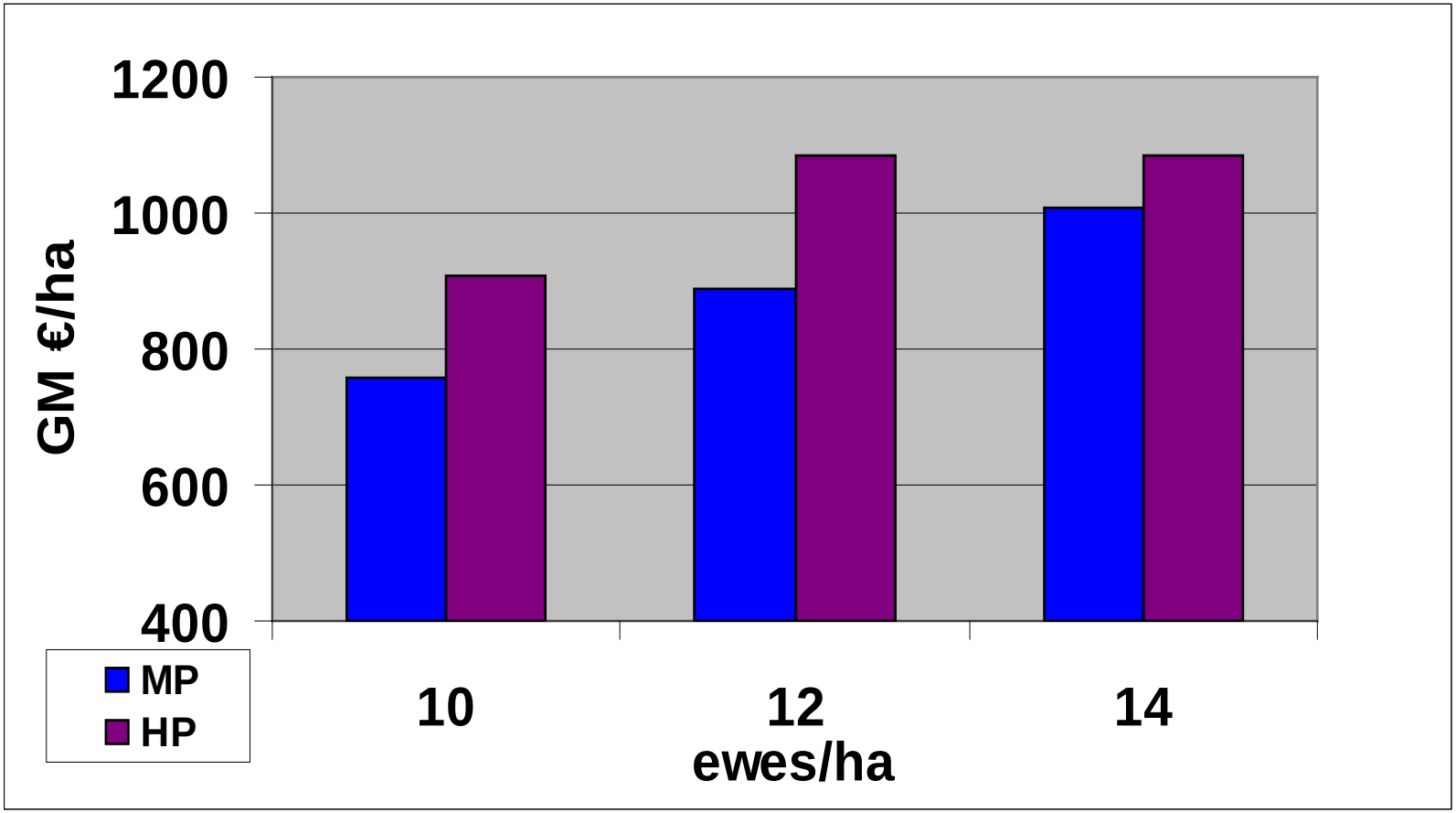
Results
Lamb birth weight and mortality levels

- Average Lamb birth weight 0.14kg lower for HP group ($P<0.05$)
  - 4.29 kg MP
  - 4.15 kg HP
- Mortality at birth 1.1 times more likely in HP group ($P<0.01$)
- 1.4 times greater likelihood of a lamb not surviving to weaning (14 weeks) in HP group

Potential from system
Carcase output/ha

	Prolificacy	
SR	**Medium** (1.66 lambs/ewe)	**High** (1.8 lambs/ewe)
10 ewes/ha	**321**	**351**
12 ewe/ha	**386**	**421**
14 ewes/ha	**448**	**489**

Potential from system
Gross margin/ha (€)



Conclusions

- Ewe prolificacy level can have an effect on lamb birth weight and mortality levels
- Increasing the prolificacy level of ewes in a flock can have a positive effect on farm output and profitability
- Further work on management and nutrition of HP flocks required to minimise lamb mortality levels

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