

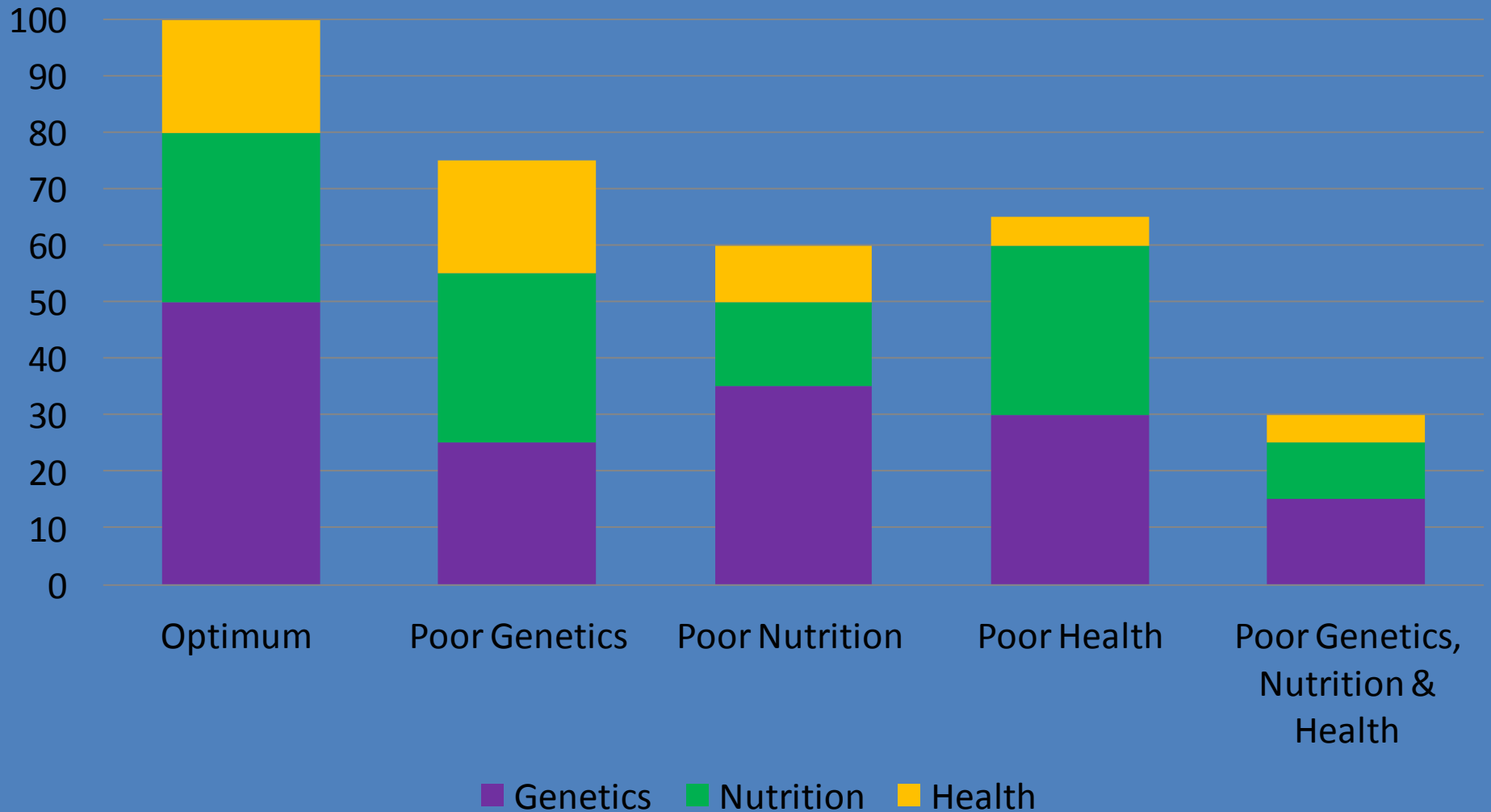
# Managing ewe replacements

Poppy Frater – Sheep Specialist

*SAC Consulting is a division of Scotland's Rural College*

*Leading the way in Agriculture and Rural Research, Education and Consulting*

## % Influence on Performance



# Replacements

---

Homebred	Bought in
+ Bred in farm environment	+ Less pressure on farm
+ Biosecurity	+ Different genetics
+ Opportunity for selection	+ Simplicity

What is most cost effective?

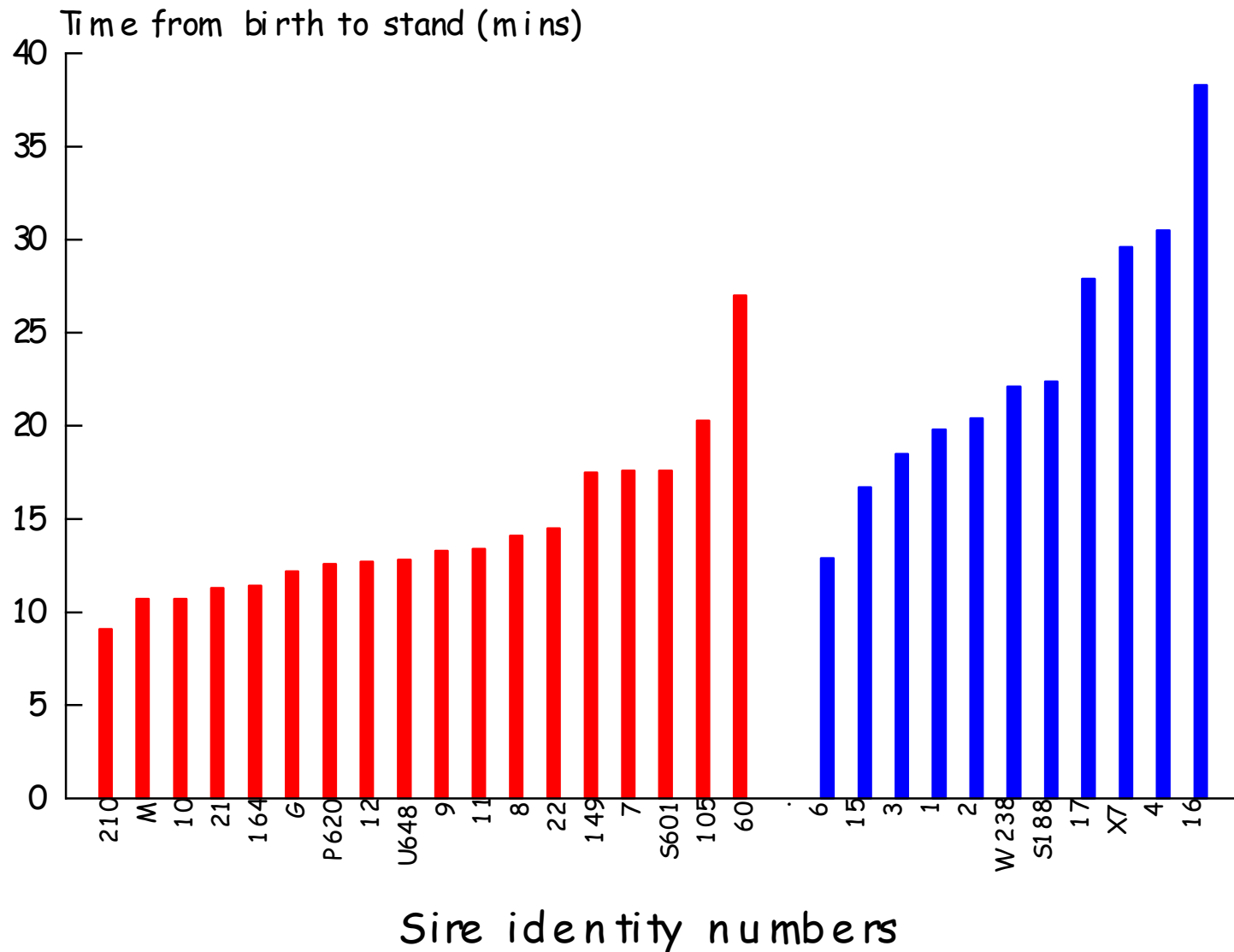
# Genetics

# Selection management

---

- Rules: e.g.
  - Born unaided
  - Suckles unaided
  - Born within first 17 days
  - Reached cut off weaning weight e.g. 28kg
  - No daggs, feet or udder issues
  - Born and reared as twin

# Genetics effects on lamb behaviour



# Selection management - how

- Tag at birth
- Marks followed by coloured tags
- EID



# Balancing replacements and sale lambs

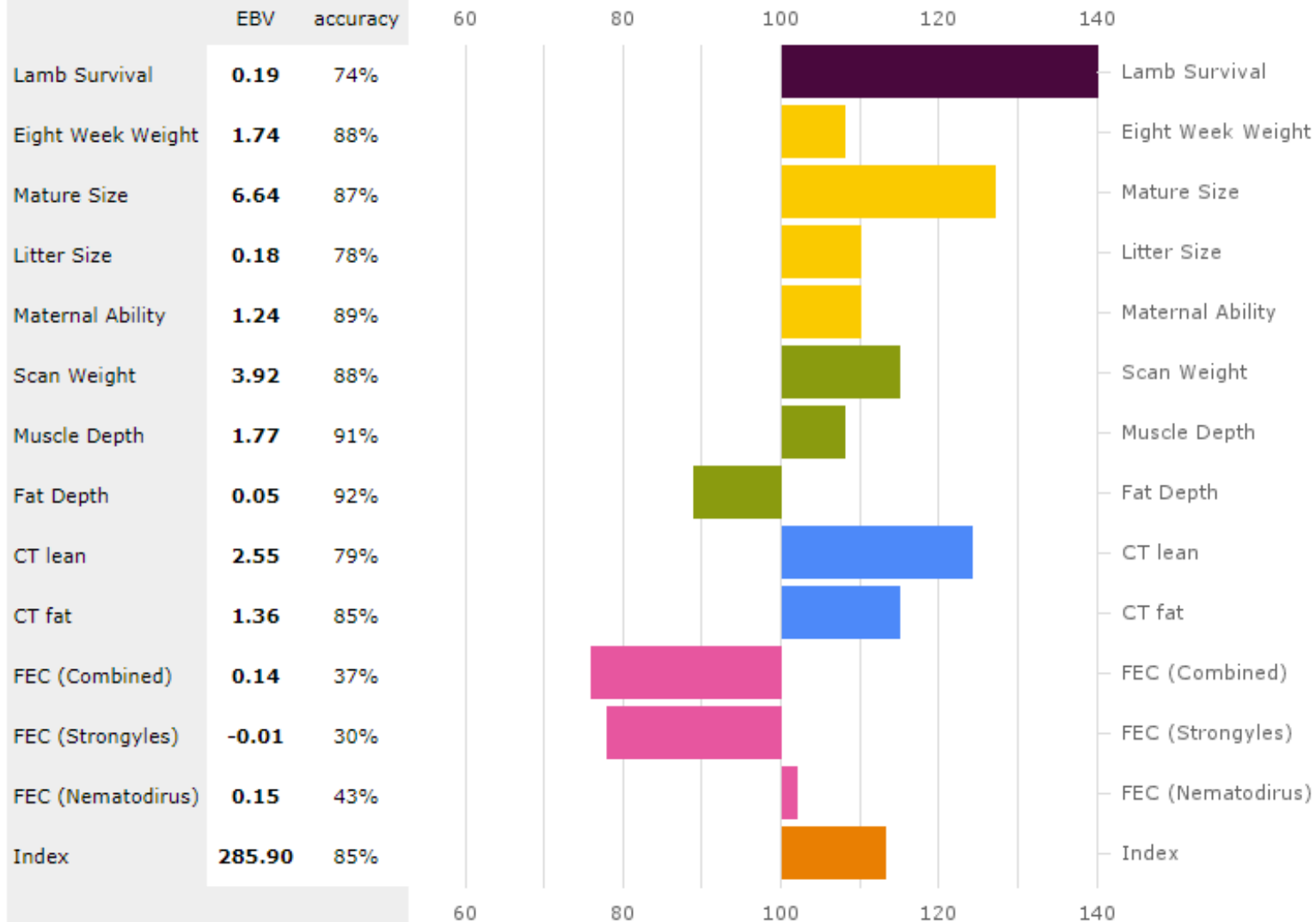
---

- ‘A flock’ and ‘B flock’
- ‘A flock’ nucleus:
  - Bred to rams with good maternal genetics
  - Retain only the best ewe lambs
  - Surplus males sold
  - Breeding female sale potential
- ‘B flock’ store/finishing lambs:
  - Bred to rams with good growth genetics



# Rams for replacements

Analysis date:09/10/2017



# Bought in replacements

---

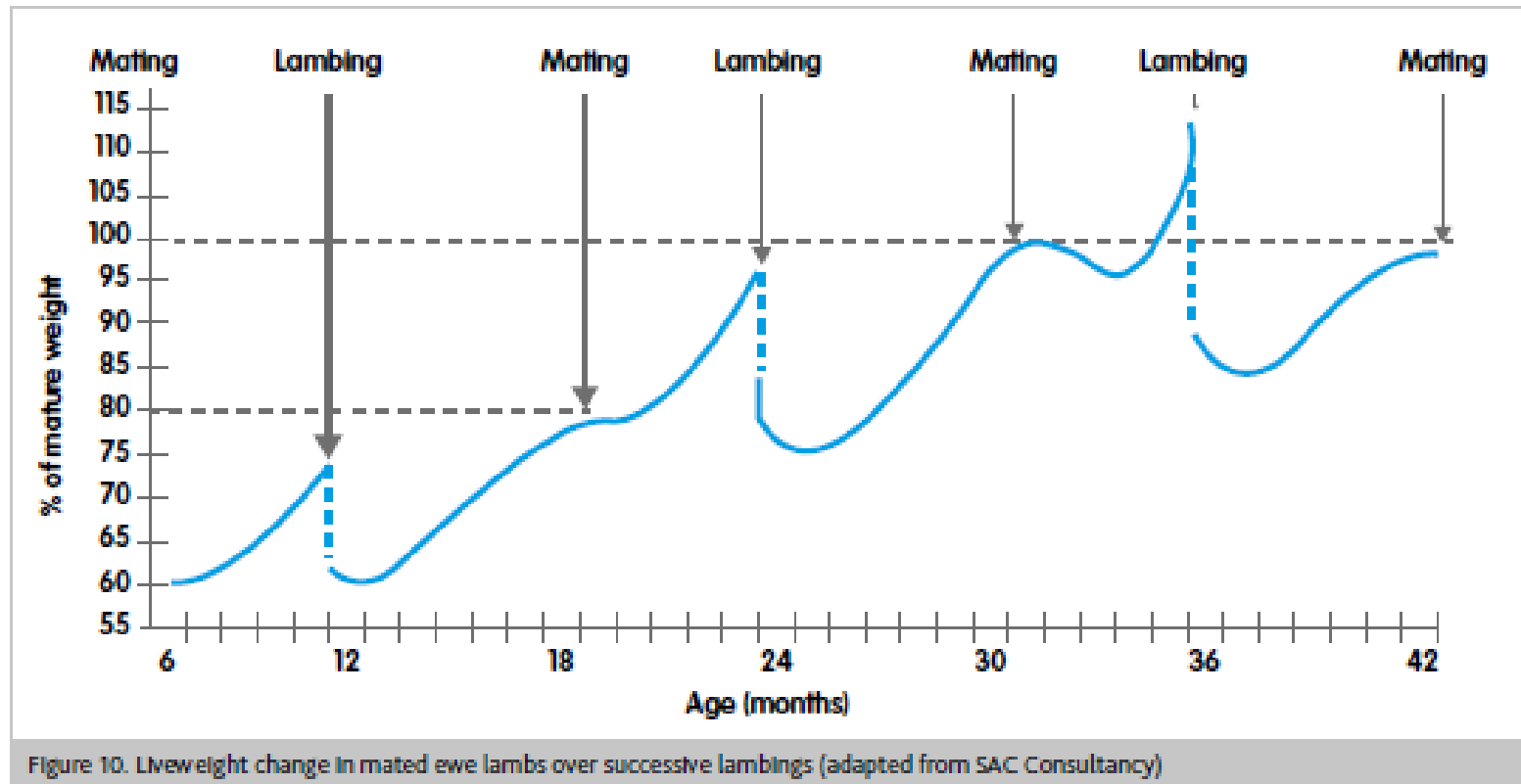
Two questions:

- Breeding rams used
- Rearing environment

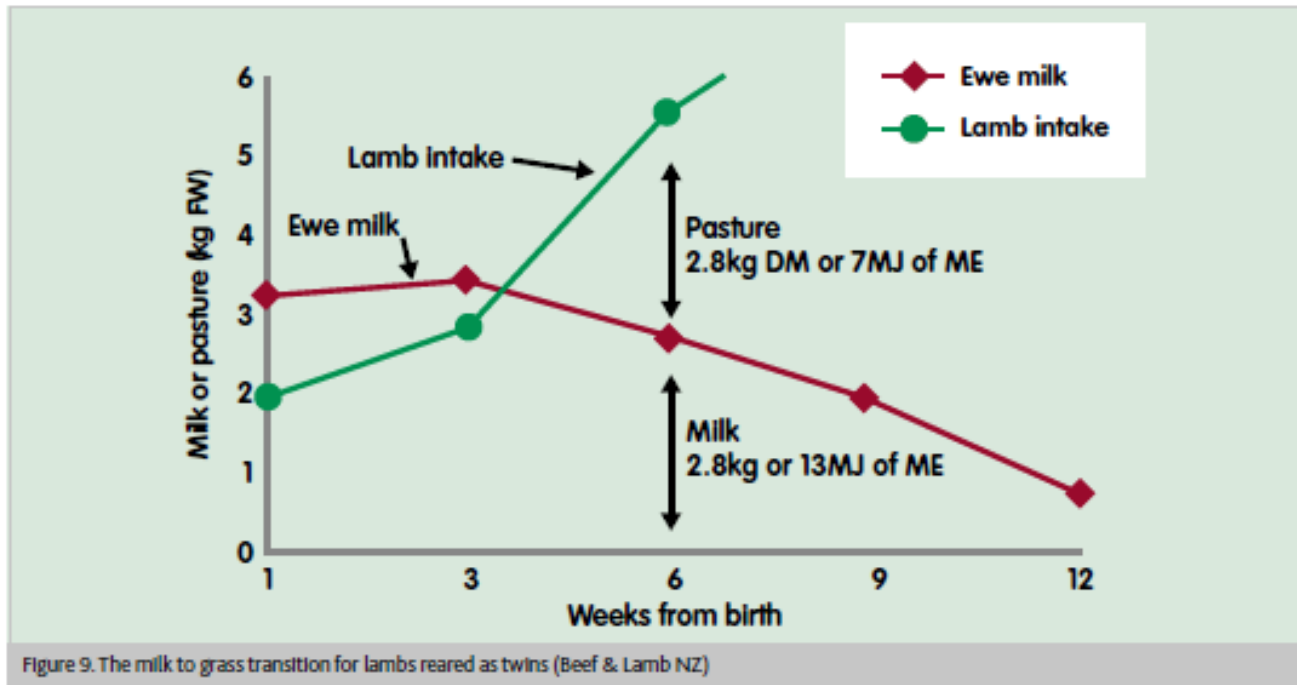
Repeat buy from one farm

# Nutrition

# Hoggs and Gimmers



# Weaning



Notes: See glossary on page 2 for definitions of abbreviations.

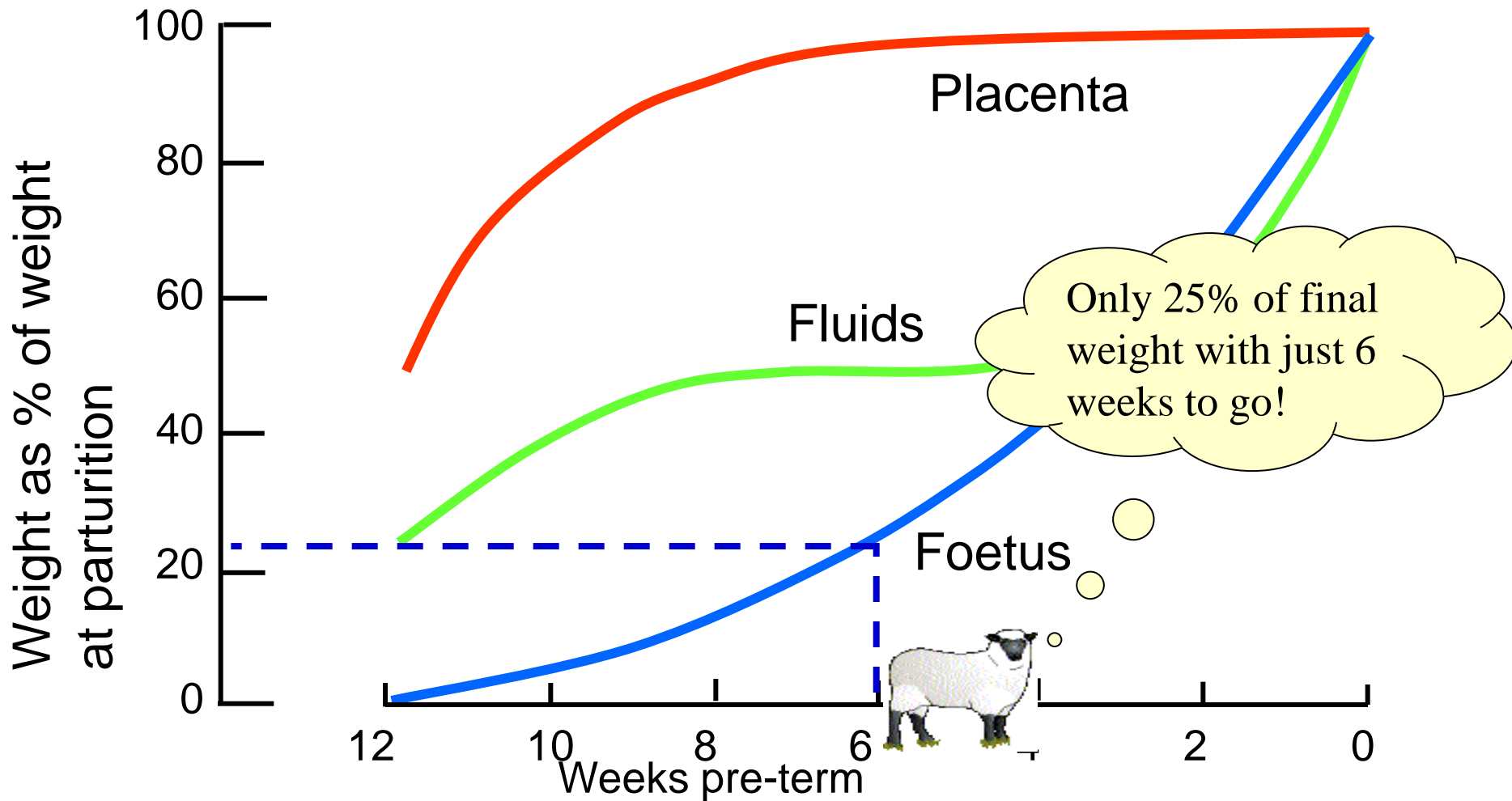
- Wean after 12 weeks
- Plan feeding to keep them growing

# Gimmers – winter feeding

---

- Target 50g/day weight gain over winter
- 0.25kg concentrates/day – hay/silage
- Manage separately to older ewes

# Late pregnancy



Not a time for low quality feeds when intake is constrained

# Diet for 70 kg single-bearing gimmers

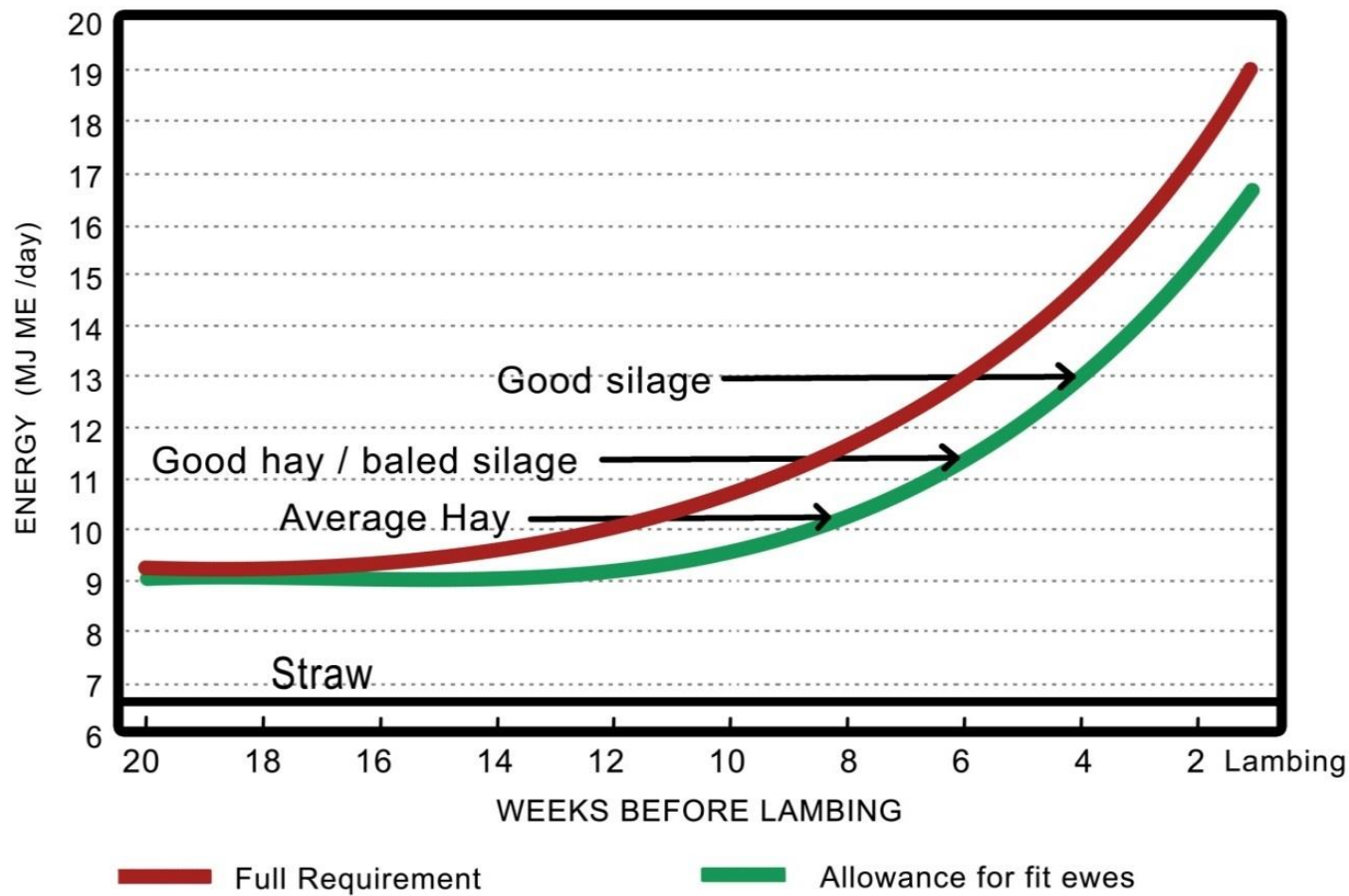
kg/head/day	Weeks before lambing			
	7	5	3	1
Hay (8.5 ME)	Ad Lib			
Concentrate Offered (kg)	0.2	0.3	0.7	0.9
Good Silage (10.5ME)	Ad Lib			
Concentrate Offered (kg)			0.3	0.5
ME MJ/day	11.2	12.3	13.8	15.8



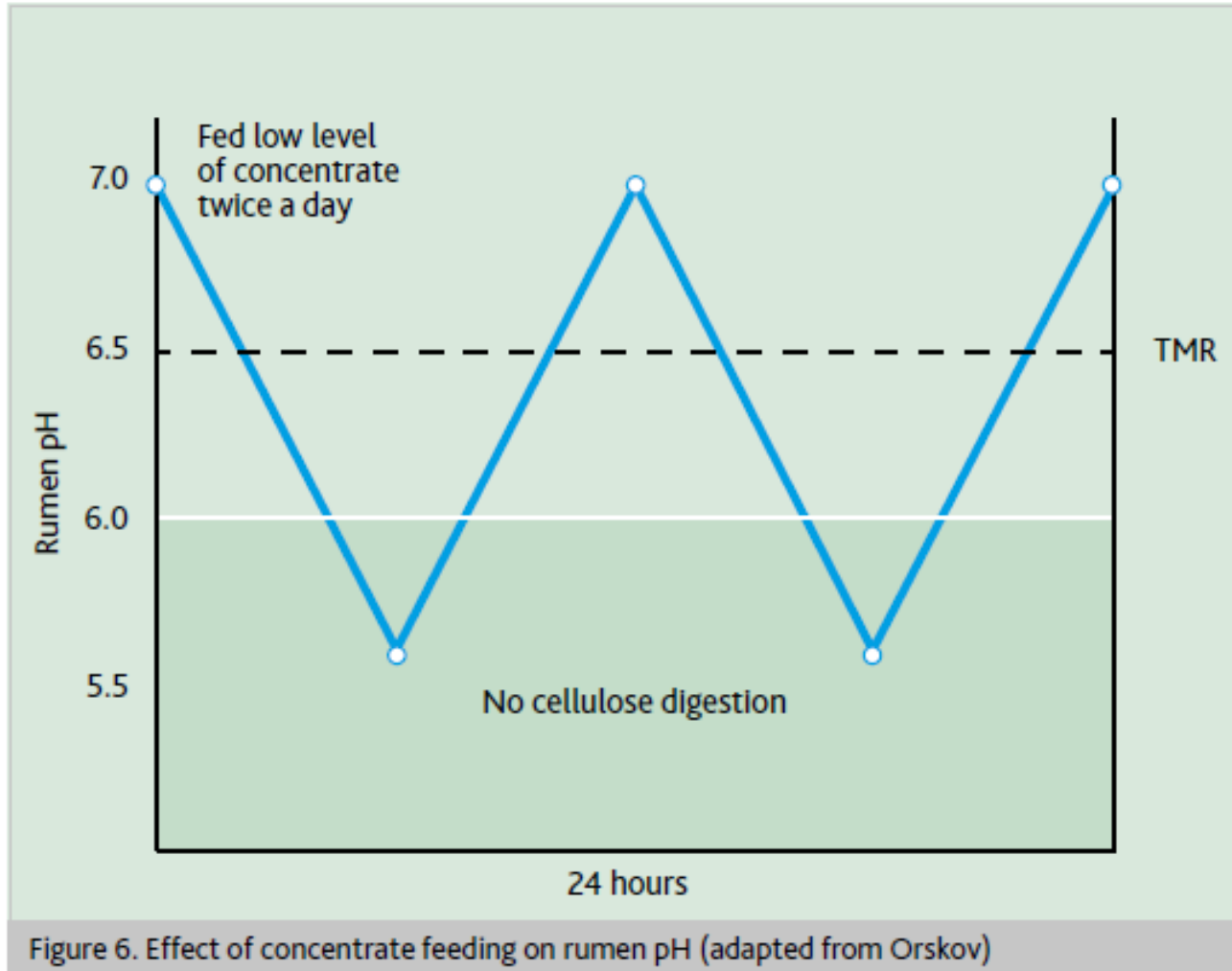
# Diet for 70 kg twin-bearing ewes

kg/head/day	Weeks before lambing			
	7	5	3	1
<u>Option 1</u>				
Hay (8.5 MJ ME/kgDM)	Ad Lib			
Supplement Offered	0.1	0.3	0.5	0.7
<u>Option 2</u>				
Very Good Silage (10.5 MJ ME/kgDM)	Ad Lib			
Supplement Offered			0.15	0.35
ME MJ/day	11.4	13.1	15.3	18.3

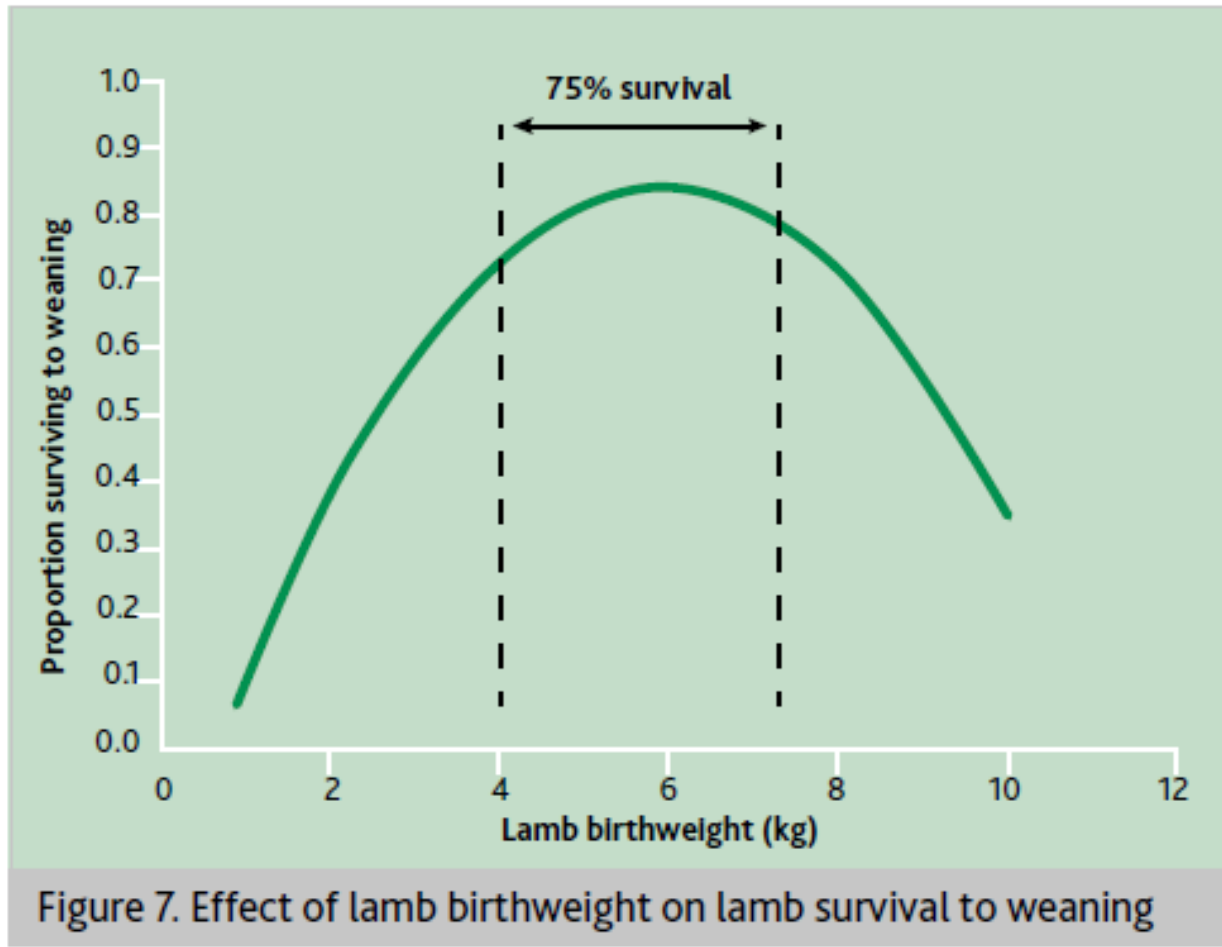
## ENERGY REQUIREMENTS OF PREGNANT EWES 75kg TWIN BEARING



# A nutritional issue



# A bit about lamb size



# Early lactation

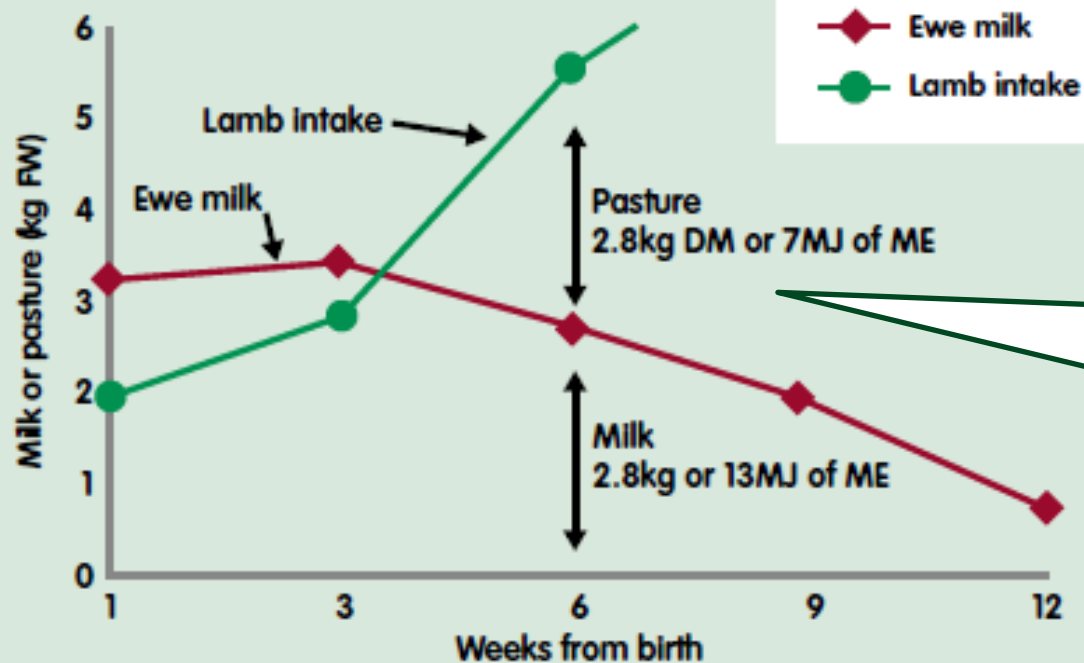
---

**Poor feeding** and **low BCS** – risk factors  
for teat lesions

- Cheapest ration: Grass
- If below 4cm – supplement with concentrates or energy licks
- Magnesium licks and/or hay/silage



# Late lactation



Quality and quantity  
pasture, forage or creep

Figure 9. The milk to grass transition for lambs reared as twins (Beef & Lamb NZ)

Notes: See glossary on page 2 for definitions of abbreviations.

# Health

# Biosecurity measures

---

- ALL incoming sheep
- Ask about health status before purchase
- Yard for 24-48 hours
- Separate field for ~ 3weeks
- Monitor
- Treat diseases appropriately with vet



# Biosecurity - worms

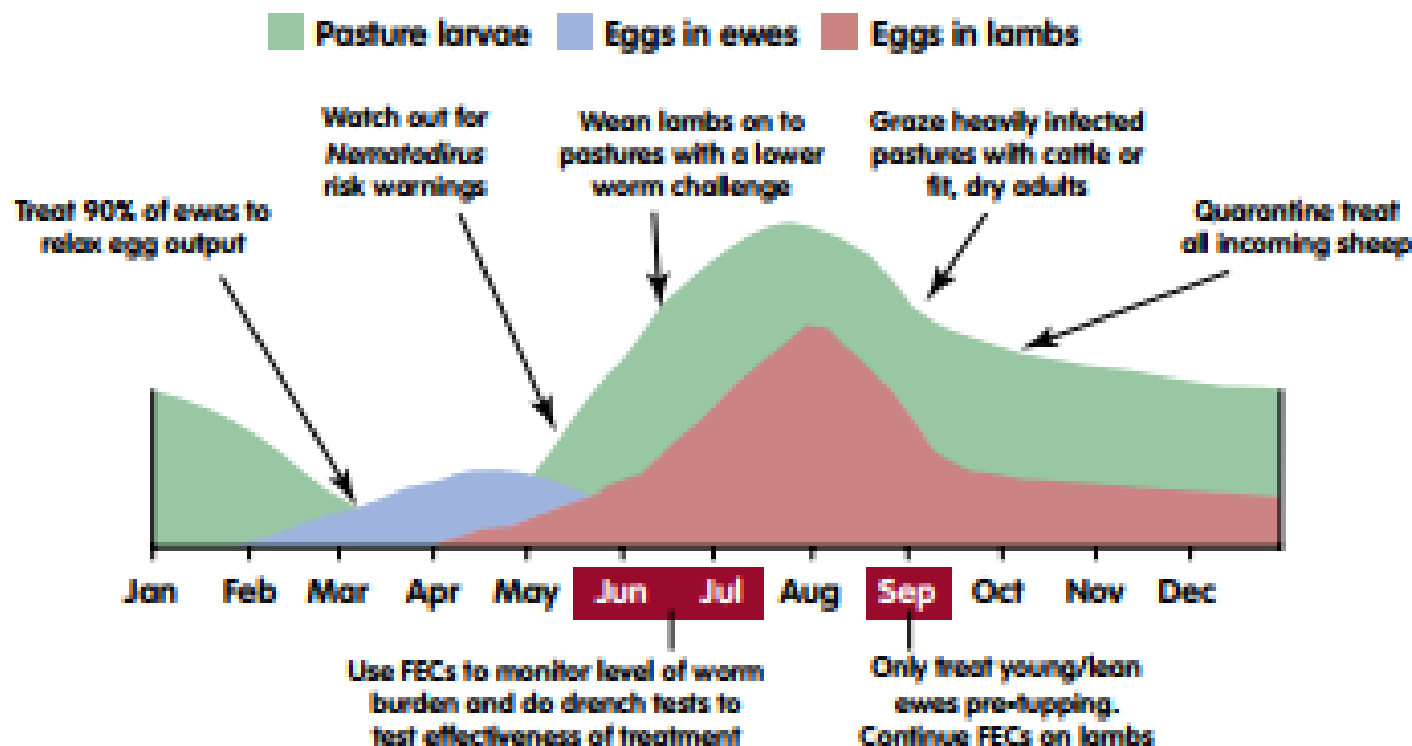
## 1. Treat to remove resistant worms

	SCAB RISK (No Dip)					SCAB RISK (Dip)					NO SCAB RISK					
4-AD	✓	✓		✓		✓	✓		✓		✓	✓		✓		4-AD
5-SI	✓		✓		✓	✓		✓		✓	✓		✓		✓	5-SI
Mox (Inj)	✓	✓	✓													Mox (Inj)
Do				✓	✓											Do
OP						✓	✓	✓	✓	✓						OP
Mox (oral)							✓	✓				✓	✓			Mox (oral)

## 2. Turn out onto dirty pasture

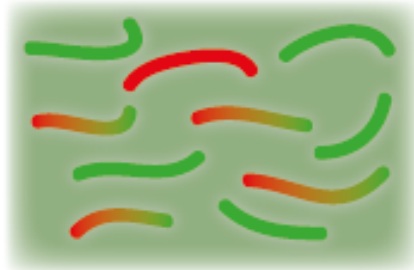
## Worm challenges through the season

The challenge to sheep from worms builds over the season. A successful control strategy takes these dynamics into account. Here is an example for a spring lambing flock.



# Principles of wormer resistance

Worm population in  
sheep before treatment

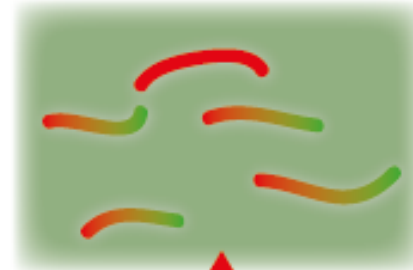


If sheep  
treated correctly






All susceptible and  
partially resistant worms  
are killed

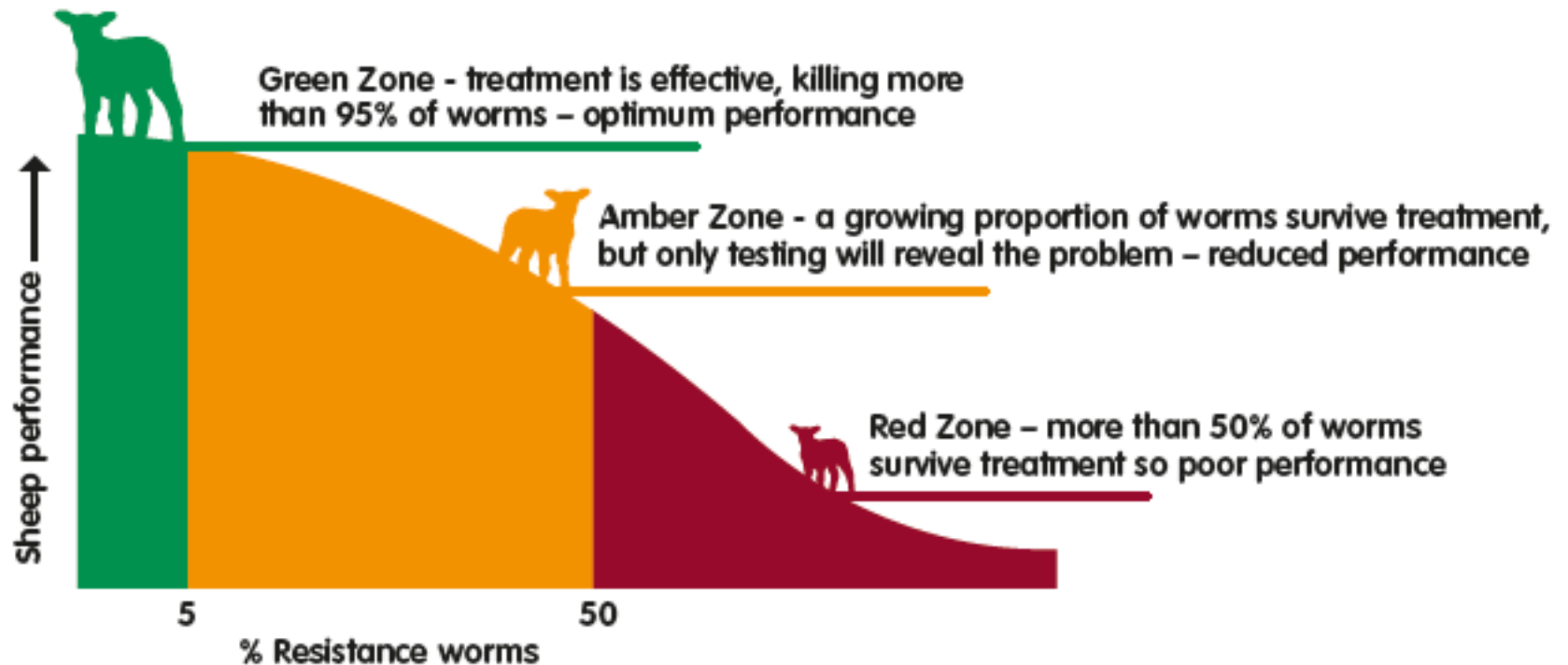
If sheep are  
under-dosed



These partially resistant worms  
can survive, increasing the worm  
burden post-treatment AND the  
genes for resistance in the next  
generation

-  = Fully resistant worm
-  = Partially resistant worm
-  = Susceptible worm

# Anthelmintic resistance



# Effective Treatment

---

1. Right Product – Target Parasite
2. Dose Rate for correct weight of sheep
3. Calibrate the Gun to make sure it delivers the correct amount
4. Have the worms developed resistance?



# Three Main Selection Pressures:

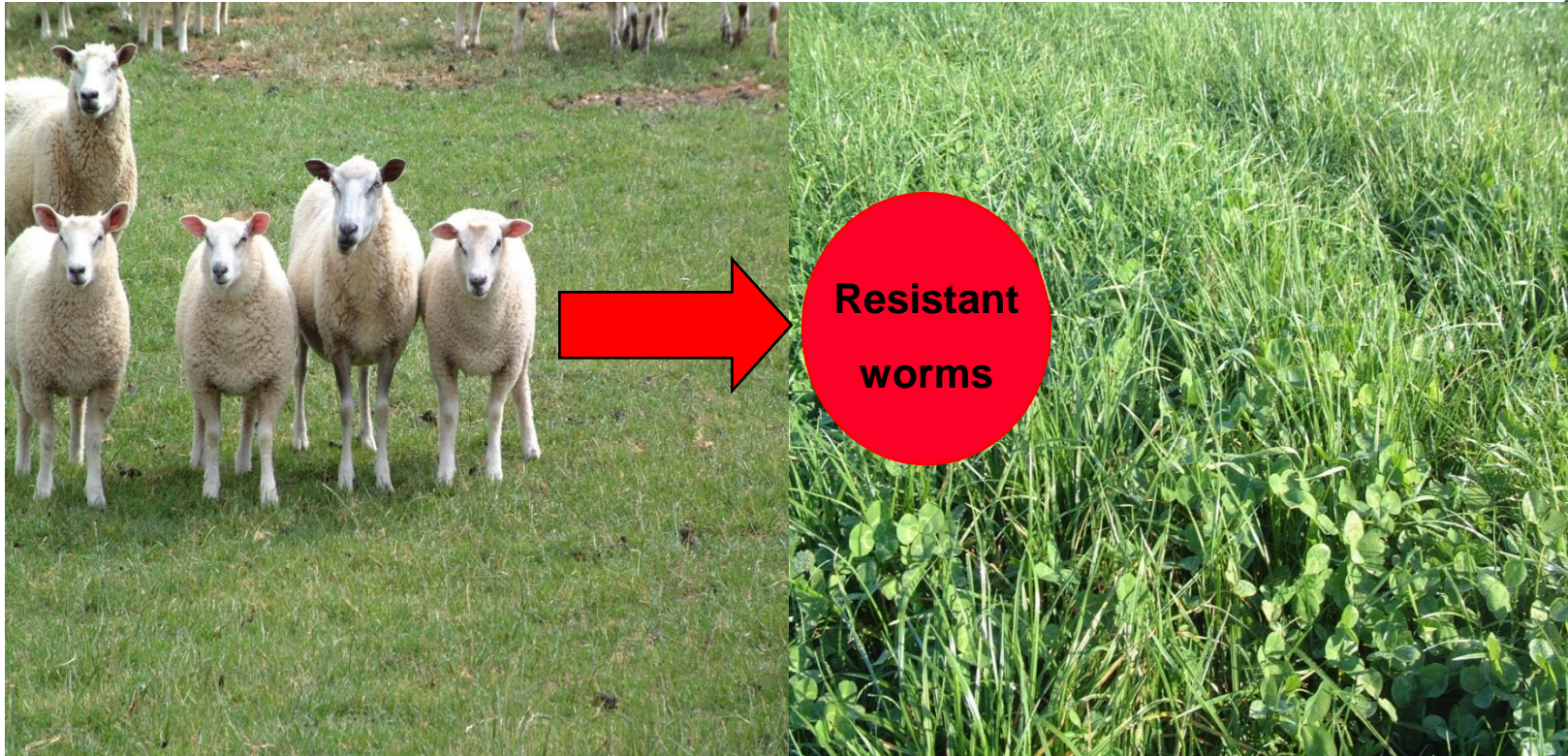


1. Under-dosing because this kills a lower % of the worms in the sheep
2. Over-use because every time we use a product we select for resistant worms
3. Exposure of a high proportion of the worm population to the anthelmintic





# Don't dose and move



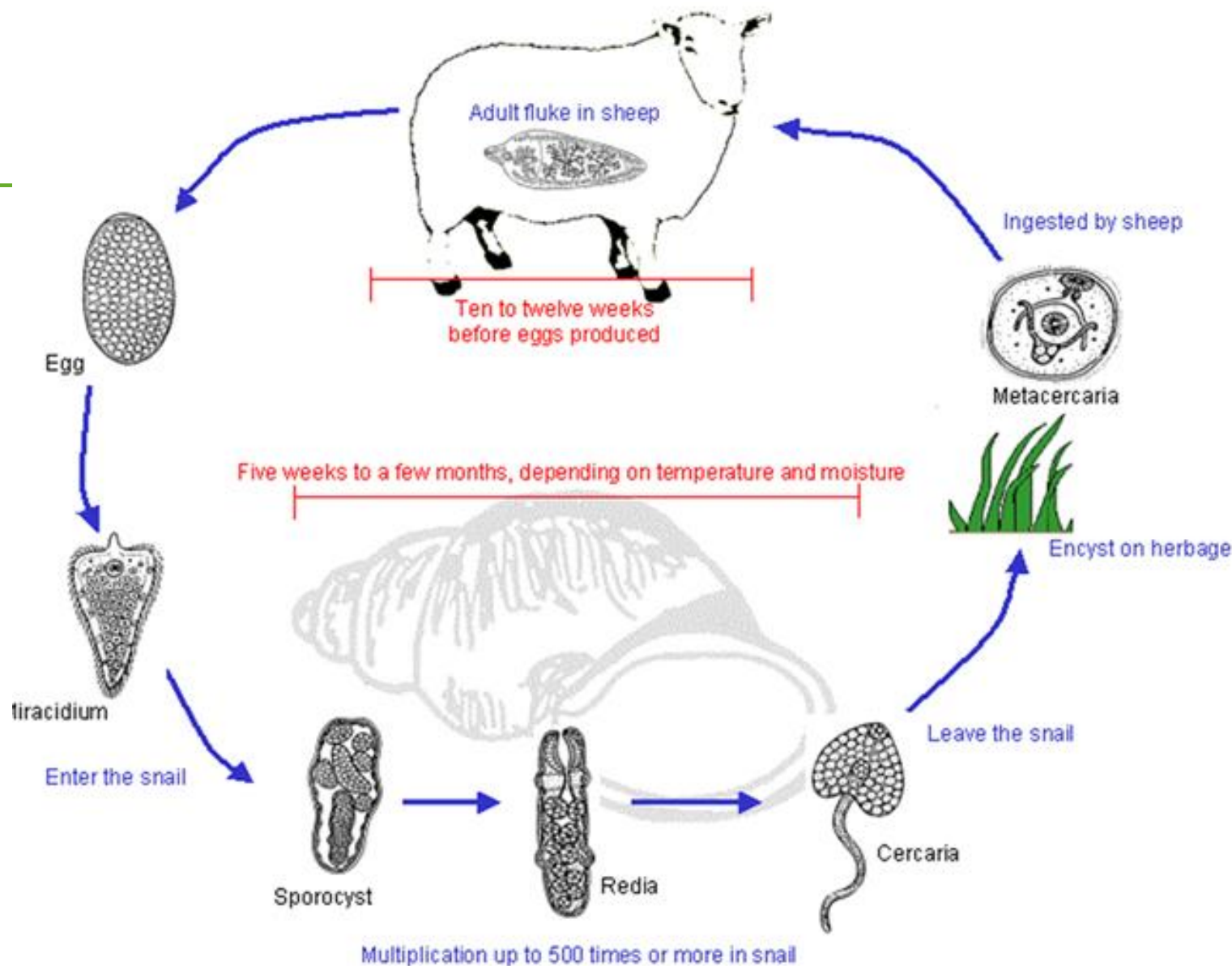
# Low challenge grazing





# Specialist Lamb finishing crops

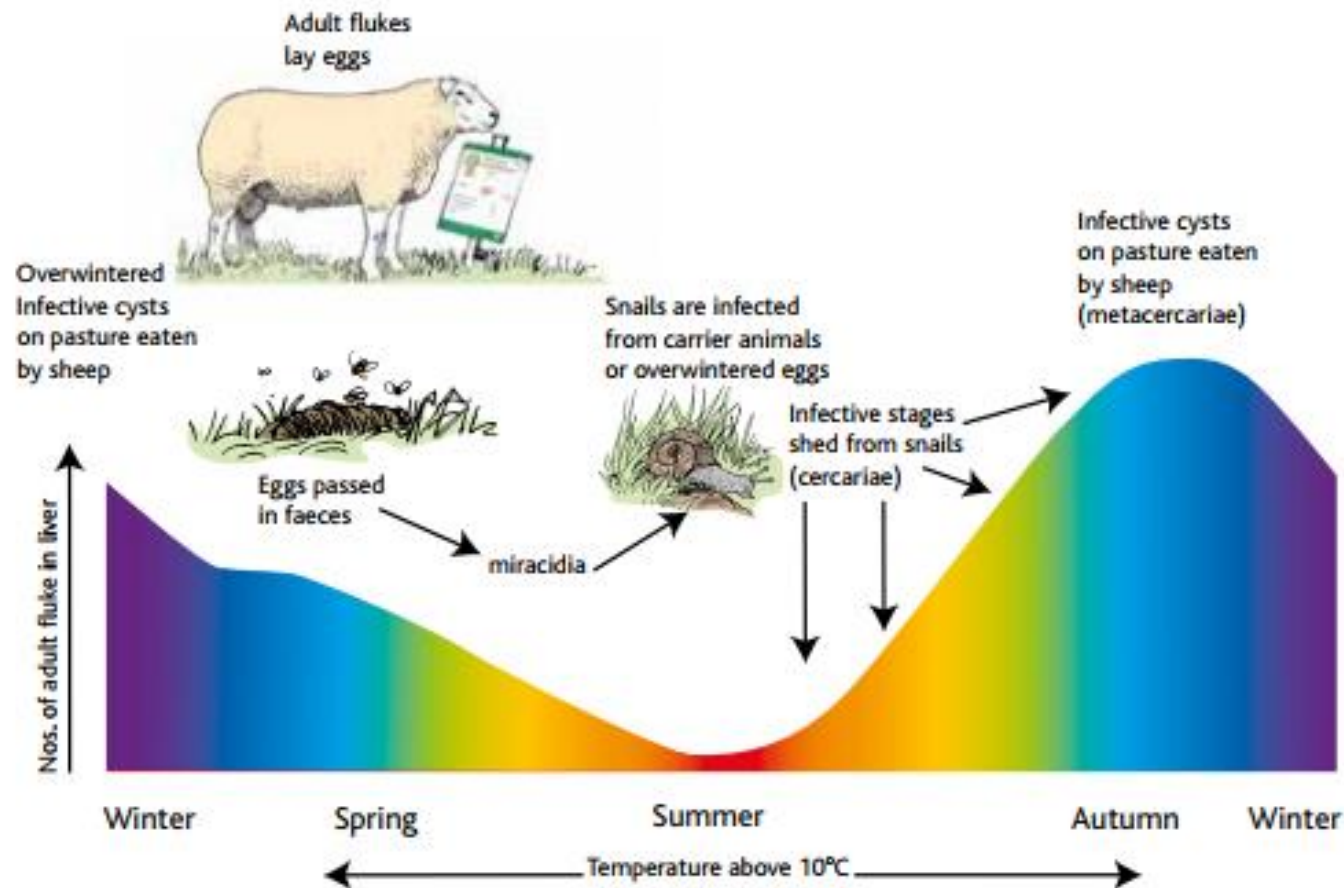




Life-cycle of the liver fluke, *Fasciola hepatica*.  
(Drawings courtesy of Drs Oldham, Jacobs and Fox)

# Liver Fluke

## Patterns of fluke infection over the seasons





# Fluke likes...

---

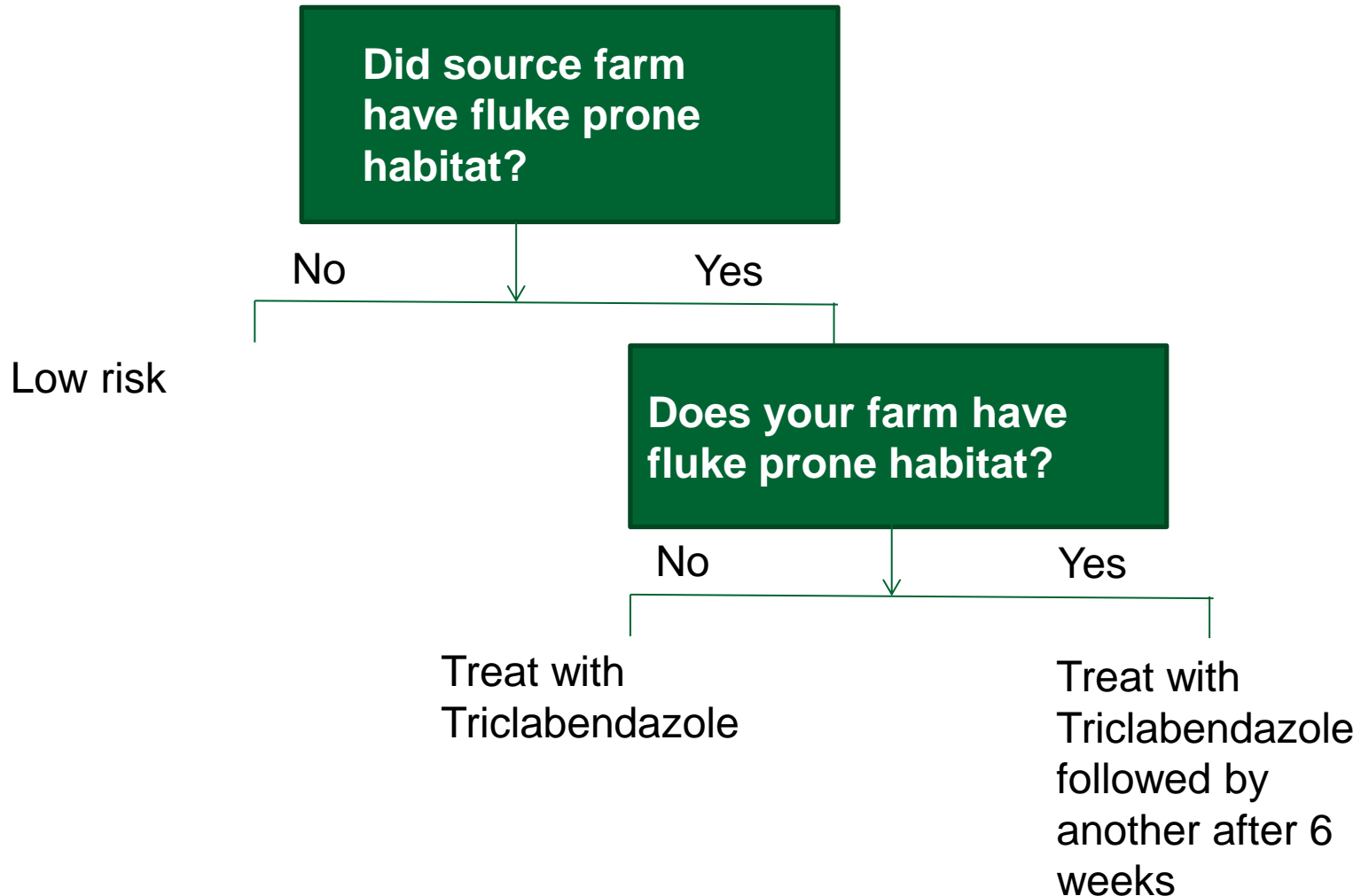
- Mud
- Slightly acidic soils
- Poor drainage



Age of fluke (weeks)																	
Flukicide	1	2	3	4	5	6	7	8	9	10	11	12	13	14			
Albendazole										50 - 70%		80 - 99%					
Oxyclozanide																	
Nitroxynil							50 - 90%			91 - 99%							
Closantel																	
Triclabendazole (TCB)	90 - 99%			99 - 99.9%													

*Table: Efficacy of flukicides available for use in sheep in the UK against susceptible fluke populations (adapted from Fairweather and Boray, 1999).*

# Avoid buying in Fluke



# Summary - fluke

---

1. Late summer/early spring: Kill adults
2. Check treatment worked
3. Assess risk by field
4. Improve, manage or avoid high risk areas
5. Consider climate conditions
6. Investigate deaths and ill thrift
7. Treatments – consider time of year
8. Quarantine protocol

# Other useful resources

---

SRUC technical notes

[www.scops.org.uk](http://www.scops.org.uk)

<http://www.qmscotland.co.uk>

