AN INITIATIVE OF

Making More From Sheep

Turning pasture into product: You are in control

Mike Hyder

EVENT PARTNERS:

EVENT SUPPORTERS:

SEASON PRICE

MANAGEMENT

FERTILISERS

VARIETIES

INSECTS and MITES

DISEASES

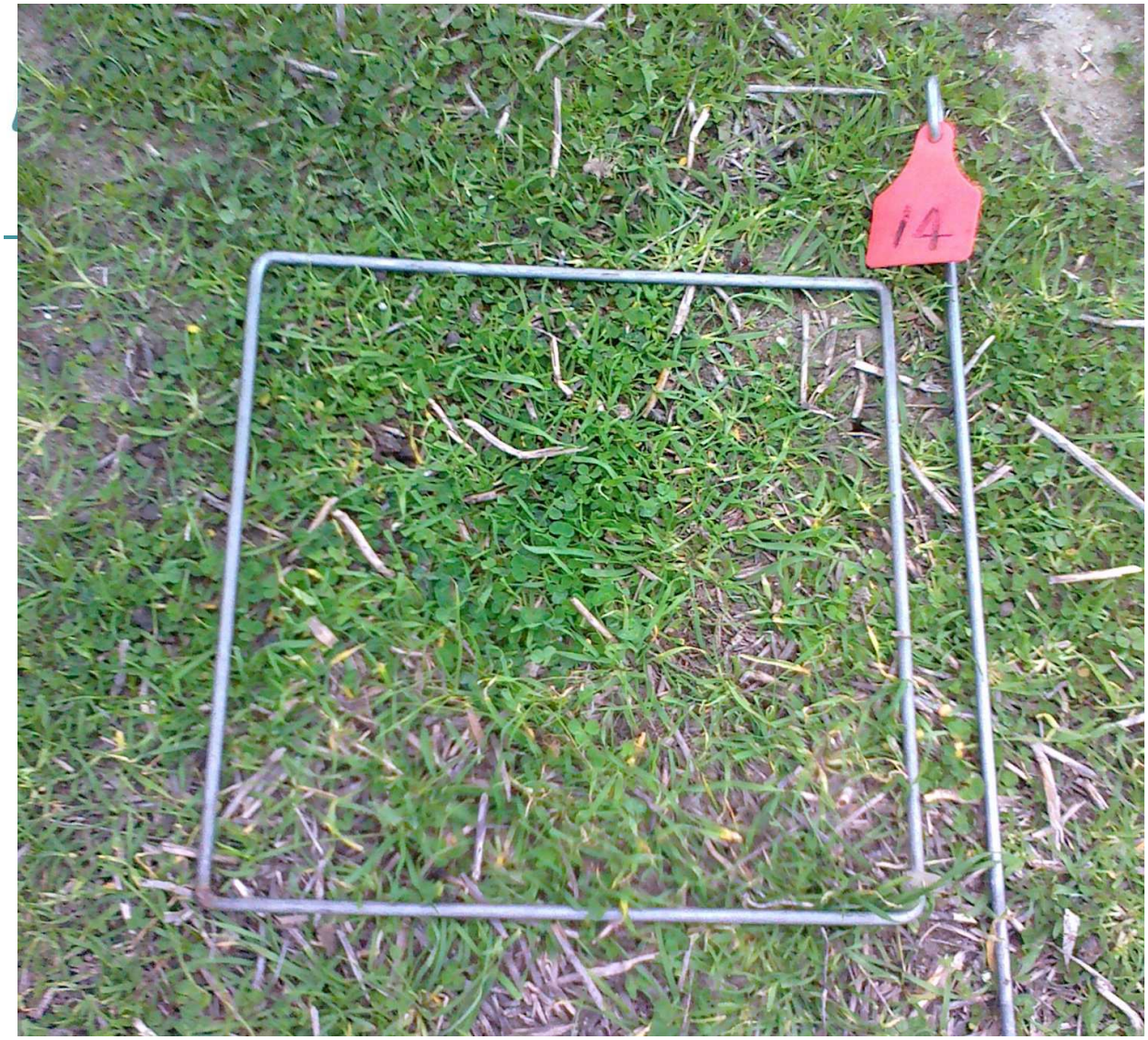
Source: Doyle, Grimm

What FOO is that?

1. 100
2. 200
3. 500
4. 700
5. 1000
6. Don’t know ‘cause I don’t use FOO levels

What FOO is that?

1. 300
2. 500
3. 700
4. 1000
5. Don’t know

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Test!

- It is 1 Jul
- The amount of green FOO is 300 kg DM/ha
- 50kg mature-weight ewes are at day10 of lactation
- Each bag contains 4 MJ of energy.
- **How many bags could a ewe eat off this pasture in a day?**

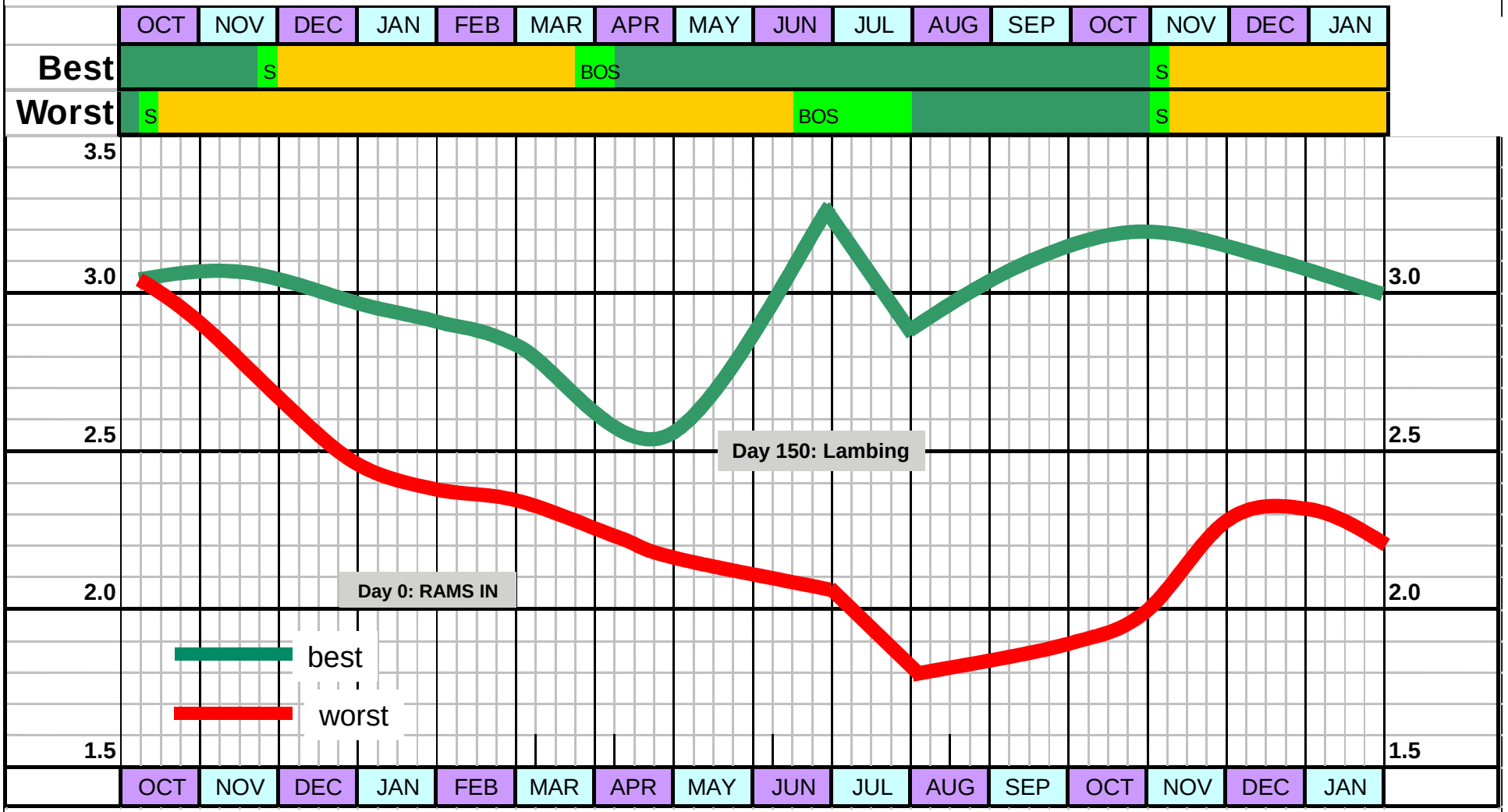
- Ewes will obtain about 11.5 MJ [singles] & 12.5 MJ [twins]
- They *need* 16.0 MJ and 20.8 MJ to maintain CS 2
- The deficit in energy is therefore 4.5-8.3 MJ
- This must come either from supplement or from fat reserves
- There is a danger that preg tox could occur so need to feed
- The only formula you need to know is deficit/MJ density
- If feeding lupins [13.1 MJ/kg DM]
- singles need 4.5/13.1= 344 g/h/d x 1.1= **378** g/h/d
- twins need 8.3/13.1=634 x 1.1= **697** g/h/d

Feed budgeting

- Commit to looking after the animals you have decided to keep
- This means:
  - planning a target condition score (CS) profile
  - having the feed on hand to meet this profile

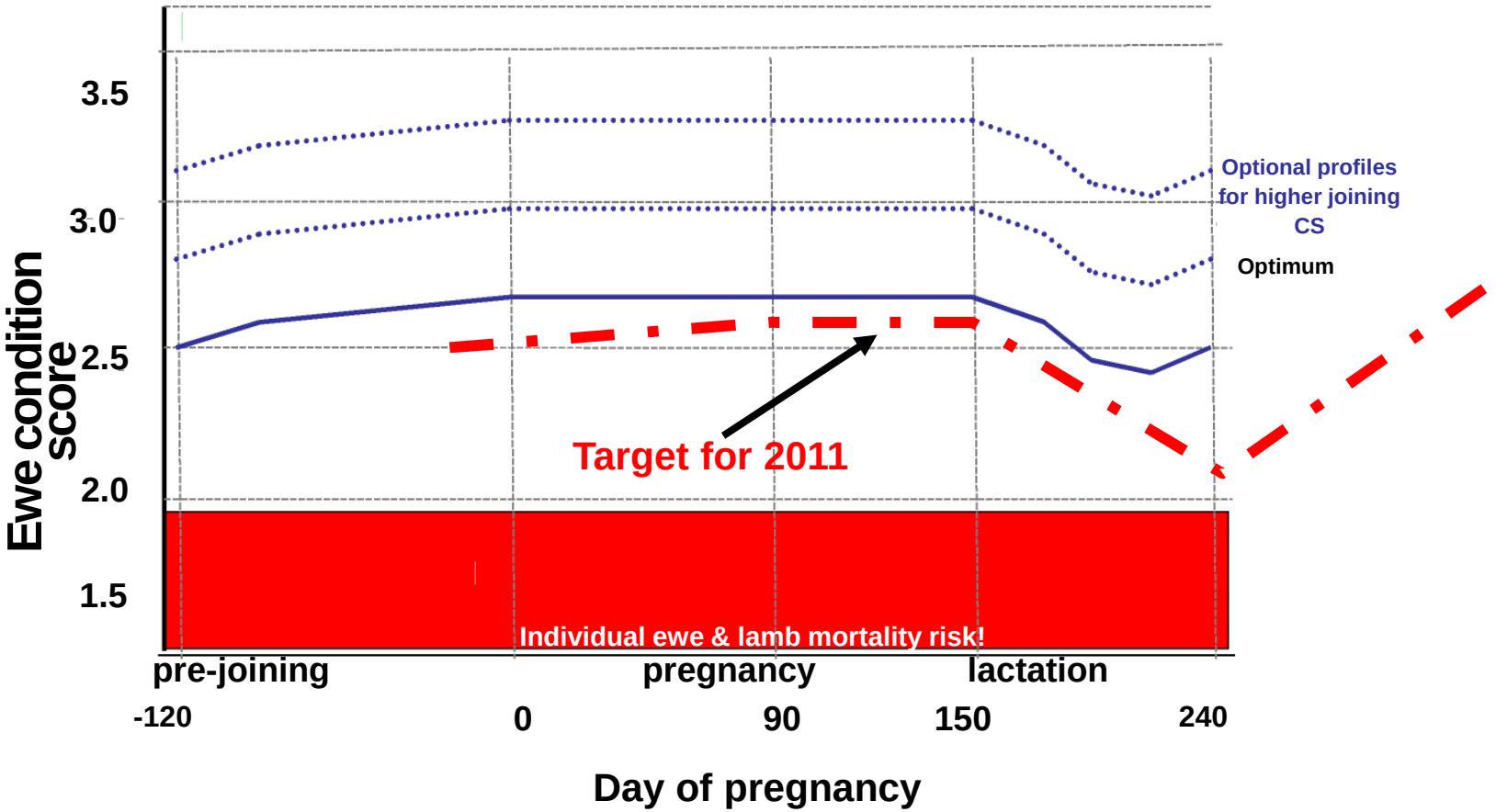
Seasonal variation in ewe condition score

Inputs & assumptions:
wool belt property with annual pastures 30-40% clover, mature age 3-4yo Merino ewes; Feb 1 Rams in; limited stubble available; minimal supplementary feeding; good start to previous season, normal finish this season



Condition score targets – Merino ewes

[mid pregnancy on dry feed, Cereal-Sheep zone WA]



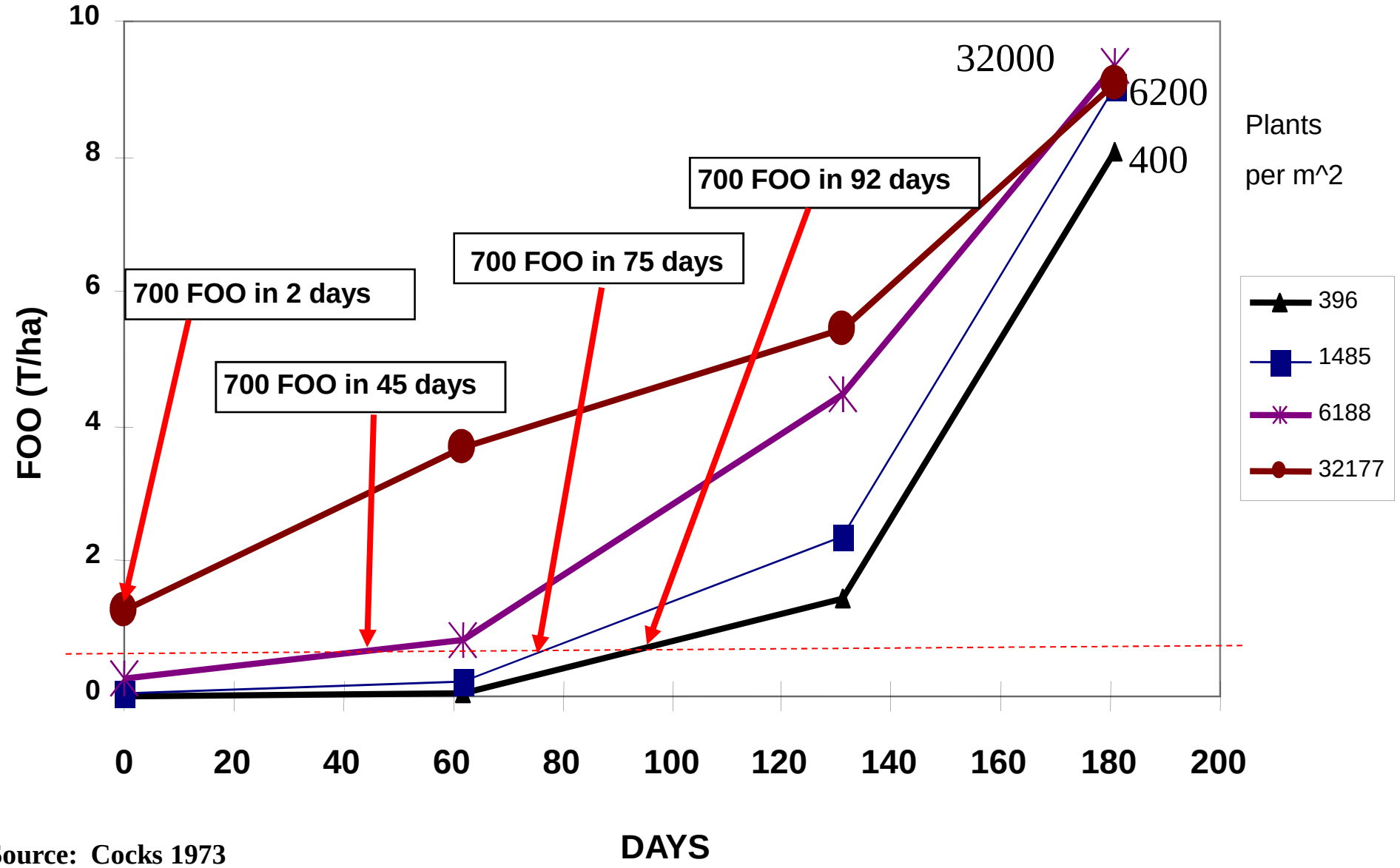
lifetimewool
more lambs, better wool, healthy ewes

Ewe condition score profile and whole farm profit

Ewe CS			Stocking rate (DSE/ha)	Whole farm profit	
D0	D90	D150		($/ha)	($/ewe)
3.0	2.2	2.2	14.4	126	12.90
3.0	2.2	2.6	14.3	158	16.20
3.0	2.6	2.6	14.3	144	14.80
3.0	2.6	3.0	14.1	172	17.60
3.0	3.0	3.0	14.3	156	16.00

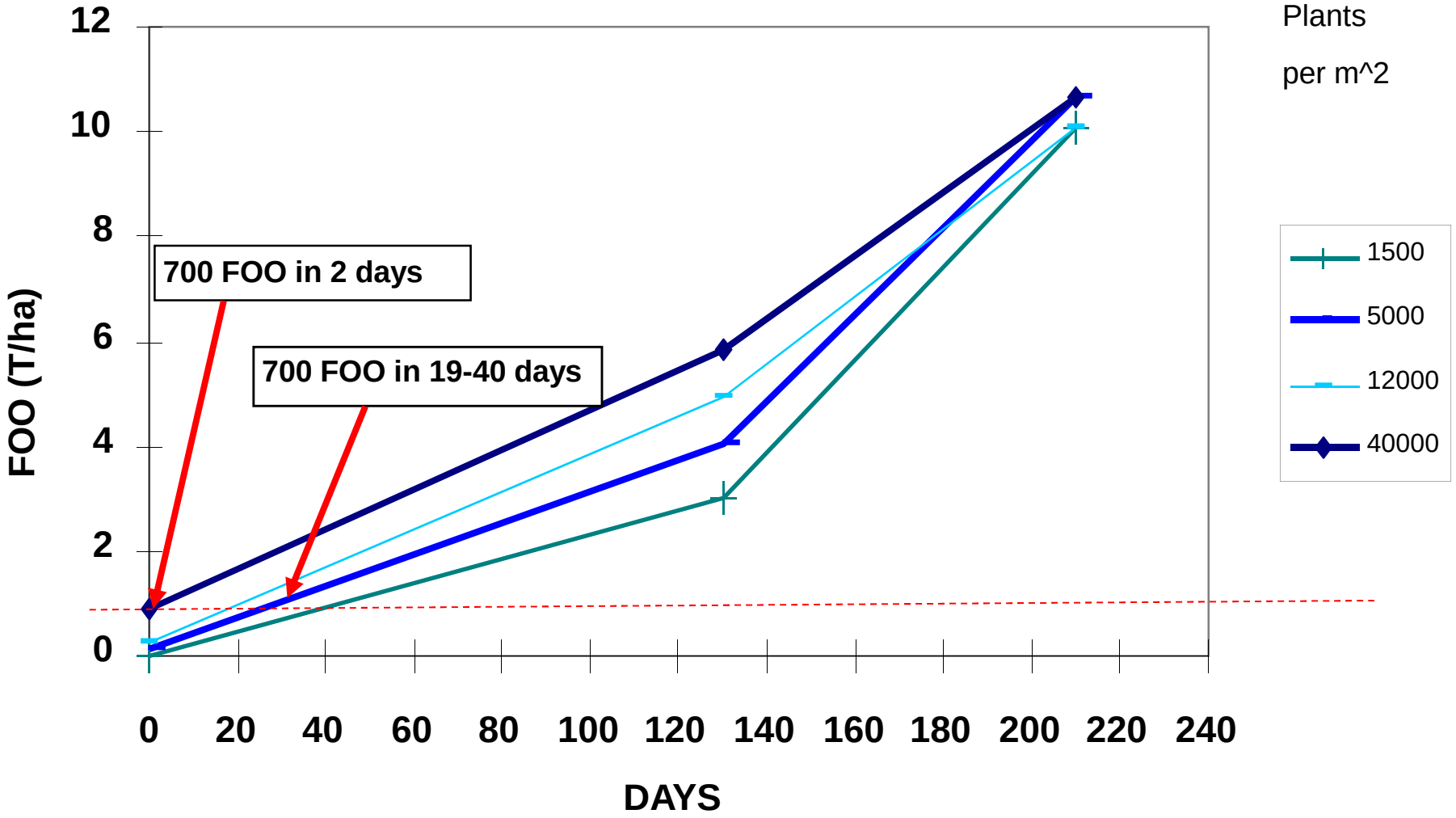
Great Southern: July-August lambing

Density of clover plants affects FOO through time



Source: Cocks 1973

Density of ryegrass plants affects FOO through time



Source: Cocks 1973

Composition affects animal performance

Feed on offer (kg DM/ha) and Number of days after the break of season before liveweight maintenance is achieved at 10 sheep/ha

Species	FOO	# days
Erodium	635	97
Sub clover	555	72
Silver grass	455	102
Capeweed	380	56
Wimmera rye	110	31

(Source: Smith *et. al* 1972)

Seed bank management

- need 1000-2000 legume seedlings /m^2 to compete with weeds *(Puckridge and French 1983)*
- hardseed vital for survival of annuals
- medics and clover: only 8-15% of seed population is accounted for in seedlings each year due to hardseededness *(El Moneim and Cocks 1986, Evans 1989)*
- 430 kg/ha medic, 200 kg clover seed required for 1000 seedlings *(Evans 1992)*
- clovers - no seed reserves after 3 seasons if all regenerating seedlings killed

Plant densities at Tammin

The data come from a mowing trial at Tammin.

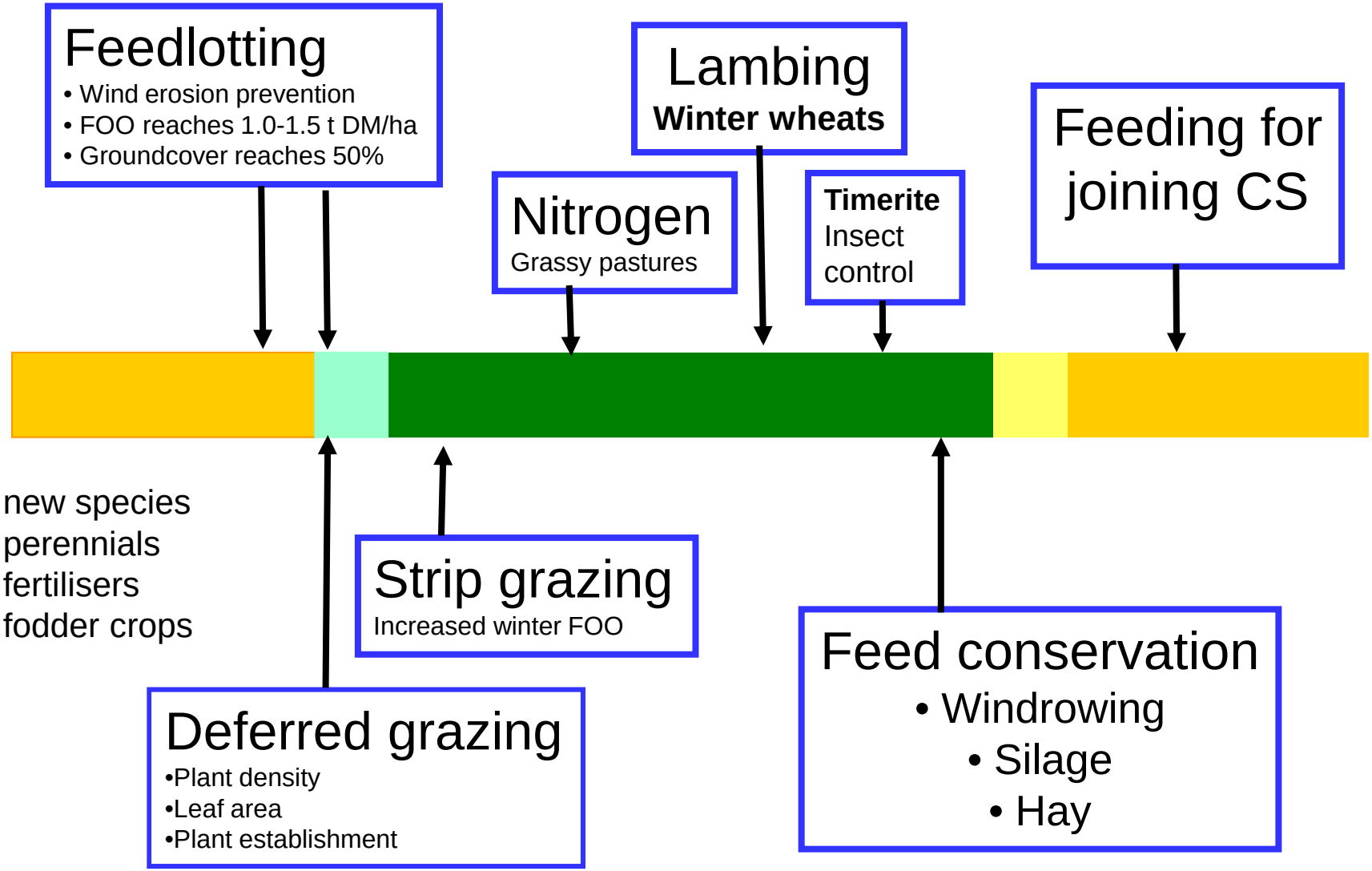
Pasture that was one year out of crop was mowed weekly throughout the green period.

The total number of plants increased dramatically over 3 years.

	Clover	Grass	Broadleaf	Total plants per square m
Year 1	117	44	13	174
Year 2	3476	631	210	4317
Year 3	6312	2865	420	9597

Source: Michael, Grimm, Hyder 1997

Putting it all together



Take home messages

- You can be in control
- Feed budgeting principles essential
- FOO and CS calibration necessary
- Manage the seed bank – plant density is King
- When seasonal conditions allow, improve composition
- There are no silver bullets