

The role of feed budgets Prospects for spring 2010

Marrying the old with the new

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Special Thanks to Doug Alcock



“Can’t manage what you can’t measure”

On-farm Decision Making:

- Where are we ?
- Where do we want to get?
ie what is our target and goal
- What tools do we need?
- How do we get there?
- Monitor and re-evaluate

Outline

- The role of feed budgeting in on-farm decision making
- Feed Budgets – what, when, why?
- The traditional approach to feed budgeting
 - an oldie but still a goodie
- The role of “Grassgro”
- Prospects for Spring 2010
 - Lamb growth rates
 - Supplementary feeding? Is it worth it this year?

Spring Growth Prospects

Key Questions:

- What is your enterprise and what is your target market
- What is your stated goal for that enterprise
eg “to sell my lambs by Christmas”
- What is your (pasture) production system
 - pasture composition, soil type, fertility

Budget, Budget, Budget

So what is a feed budget?

- Balance between feed demand by animals and feed supply by pasture

Helps to determine :

- Likely feed shortfall or surplus – and what to do?
- Animal growth rates and therefore marketing strategies
- Changes in management ie lambing time

When ? Key on-farm decision-making times to undertake feed budgets

MONTH	SEPT	OCT	NOV	JULY	AUG
NO. OF DAYS	20	31	30	31	31
STOCKING RATE (NO./HA)	7	7	7	1	1
DAILY INTAKE KG/HD/DAY	1.8	2.0	2.4	8.0	10.5
FEED ALLOWANCE (Intake * Wastage Factor)	2.0	2.2	2.6	10.4	13.6
FEED REQUIREMENT KG/HA/DAY	14	15.4	18.2	10.4	13.6
TOTAL FEED DEMAND kg/ha	280	477	546	322	422
STARTING FEED (kg/ha)	730	1250	2943	900	950
PASTURE GROWTH RATE Kg/ha/day	40	70	50	12	15
FEED GROWN KG/HA	800	2170	1500	372	465
TOTAL FEED SUPPLY KG/HA	1530	3420	4443	1272	1415
NET FEED AVAILABILITY “ CLOSING BALANCE” kg/ha	1250	2943	3897	950	~1000
TARGET FEED LEVEL PASTURE BENCHMARK KG/HA			3000	1100	1100
FEED SURPLUS / DEFICIT			+897	-150	-100

Feed Budget calculations

- $+897 / 81 \text{ days} = 11.07 \text{ kg/ha/day}$
- $11.07 / 2.0 \text{ kg/head/day (average feed allowance)} = 5.5 \text{ ewes/ha}$
- **Therefore can increase S.R by an additional 5.5 ewes/ha ie to 12.5 /ha**

Part B Cattle

- $-150 / 31 \text{ DAYS} = 5 \text{ kg/ha/day}$
- $5 / 8 = 0.62$
- Decrease S.R by 0.6 cows/ha ie from 1 to 0.4
- ***“At this level of feed availability and intake there will be substantial weight loss – 0.7 kg/head/day . Either feed , reduce S.R as above or accept controlled bodyweight loss.”***

Spring ie Sept/Oct/Nov

- Period from end of winter until the end of the main growing season
- Depends upon the moisture availability at end of winter and water holding capacity of our soils
- Therefore either crucially important or not?
- Period of highest pasture growth rates but also greatest feed demand
- Can be the easiest or most difficult budget to do
- September - easy; October - OK ; November - anybodies guess!

Spring feed Budget (cont)

- Complicated because coincides with lambing/ calving
- Rapidly changing feed intake
- Increasing pasture growth rates but declining feed quality
- Therefore difficult to accurately predict liveweight, especially in poor springs (Grassgro)
- Helps for opportunistic trading

“End” of the growing season ie the summer / autumn budget

- Could be anywhere from end Sept to end Nov
- Undertaken when we should have the greatest “bulk” of feed for the year
- Large quantity BUT low quality
- Provides an indicator of “dry feed” and therefore how long it will last
- Coincides with when animals should be “fattest” and therefore most marketable
- Monitor over summer – ground cover

Winter Feed Budget

- May to end August
- Overall farm stocking rate determined by winter feed supply
- “easiest “ and most reliable to undertake
- influenced mostly by temperature
- Need to allow for nutritional demands during pregnancy therefore must consider quality
- Useful for making management decisions especially lambing time and need for feeding

Feed Budgets: Summary

Benefits

- Simple, easy and effective
- Provide useful “ball park” information to help with normal management and decision making
- Help to question where you’re at – ie allow you to be proactive

Feed Budgets and “Grassgro”

However:

- By definition tends to be a “snapshot” in time and use broad generic figures
- Difficult to predict accurately pasture growth rates , animal intake and animal performance
- No direct ability to evaluate economics
- *GRASSGRO* helps to address these

Spring Growth Prospects

Issue to be addressed:

- *I have joined my Merino ewes to poll Dorset rams to start lambing on 6th August. They are lambing on my best most improved pasture (an old Phalaris / sub clover basalt paddock with some annual grasses) and stocked at rate of 4 ewes/hectare after the drought.*
- *We have had O.K winter rainfall but starting to dry out . Lamb market is strong.*
- ***I would like know: what sort of growth rates can I expect from my 1st Cross lambs this spring?***
- ***I am thinking about taking them through to Feb and selling when above 40 kg. Can I do this? Do I need to feed - and if so how much?***

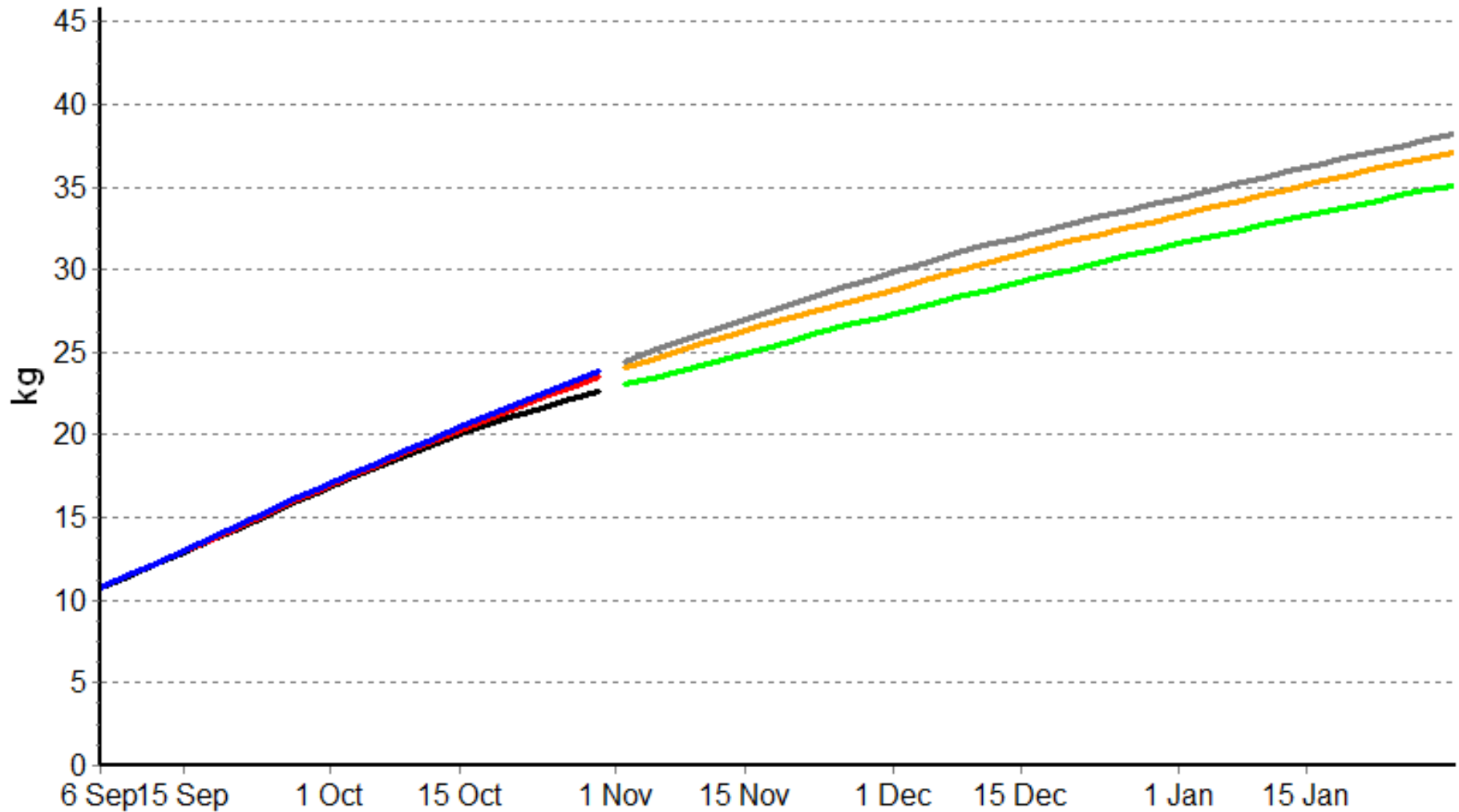
What “we” did

- Described our farm system using local information about soils, pasture, and animal production system
- Accessed the latest weather data from the Bureau of Meteorology ie up to **6th September** (Doug Alcock)
 - “*our starting point*”
- Using the base farm system we then ran the model using climatic data for the past 40 years (1970 onwards) up until 6 September.
- Then undertook a “tactical run” whereby using the current pasture, soil and animal conditions (ie from 6 September) – we ran the model from the 6th September to Feb 1 based on the past 40 years of weather data.
- This was undertaken both with *no feeding* and then when *targeting a BW of > 40 kg by Feb 1*

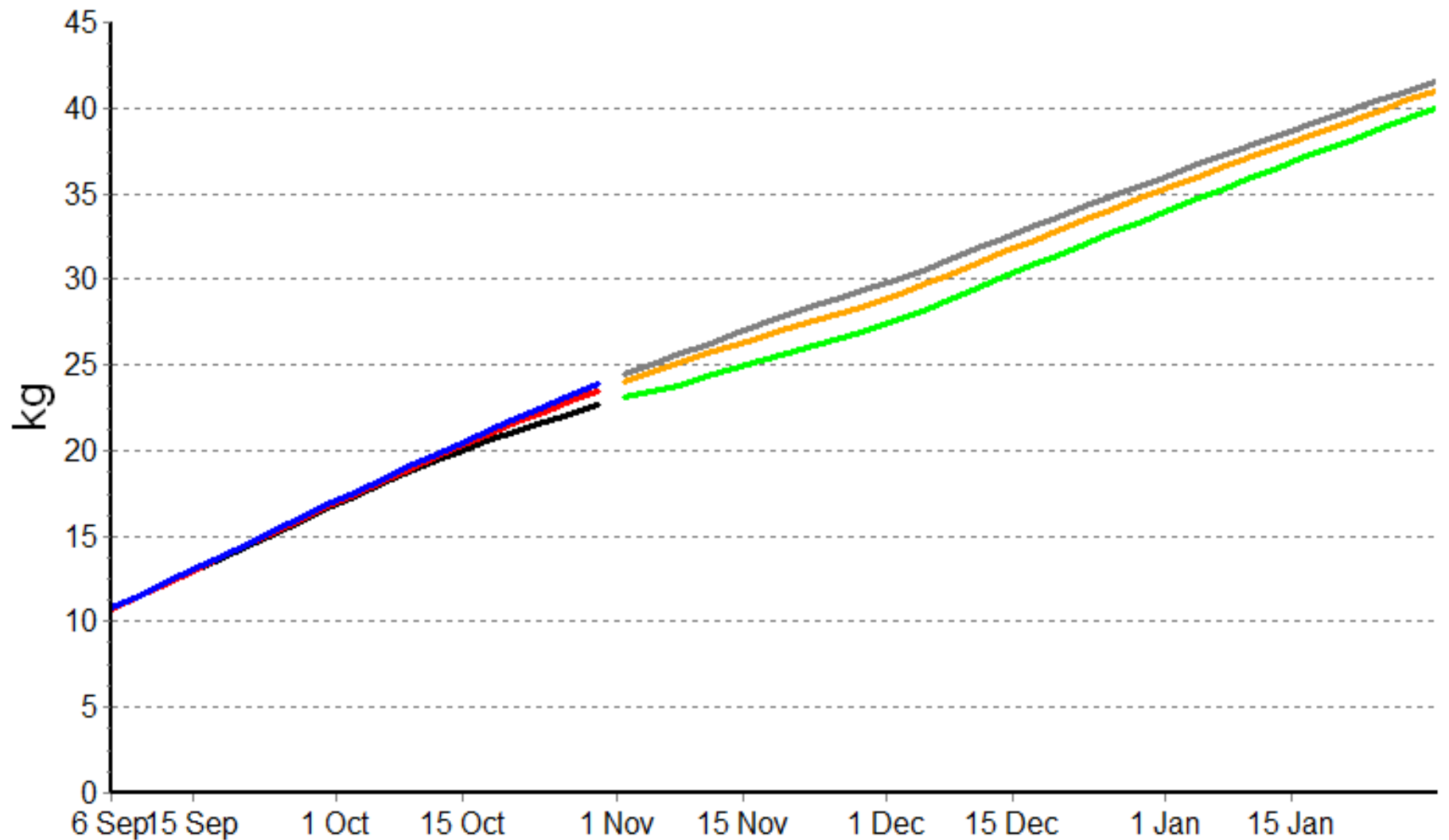
Results

- Average rainfall from 6 Sept to 1 Feb in the period from 1970 to 2009 is *210 mm*
- Lamb Growth rates - nil feeding
- Lamb Growth rates – production feeding to reach > 40 kg by Feb 1 (41 kg) starting Nov 1

Lamb liveweight (no feeding)



Lamb liveweight - production feeding



Results

- At weaning on November 1 *lambs consistently weigh 24 kg* (ie given “today’s” soil moisture conditions, even in the worst 10 % of years)
- At end November we start to see a small variation in bodyweight between years ie in the worst 10% of years the lambs weigh ~ 27 kg; best 10 % 30 kg and *average 28.5 kg* (ie when production feeding scheduled to commence)
- On Feb 1 if no feeding then average weight of lambs is 37 kg; in the worst 10 % of years 35 kg; and top 10% 38 kg
- If wish to target > 40 kg (actually 41 kg) by Feb 1 there is a 100% probability will need to feed 560 g/head/day which at \$200/t = \$ 6.72 per head
(nil chance of having to feed > 675 g; 50 % chance of 630 g/hd)

Discussion

- Given the reasonable to good soil moisture conditions at present and allowing for seasonal variability over the past 40 years then:
- You can be confident that your lambs will reach 24 kg at weaning on Nov 1
- Up to the end of November they will have reached 28.5 kg on average (Worst case scenario: 27 kg)
- If you want to get to your target weight > 40 kg (41kg) by Feb 1 then you will need to feed a minimum of 560 g/hd/day and this will cost you ~ \$ 6.72
- If you don't feed then your lambs will still average 37 kg on Feb 1 and may reach 38 kg if seasonal conditions are amongst the top 10 % of years (worst case scenario 35 kg)
- Additional weight gain 4 kg which @ \$ 2.70 /kg LW = \$ 10.80
- Difference is \$ 4.08 per head

Discussion (cont)

- Given the farm description earlier and with the amount of soil moisture in the ground at present it is evident that lamb growth rate will be “good” this spring at least up to end November
- There are alternatives to this system ie finishing lambs on a specialty pasture or crop eg lucerne
- Undertaking a tactical analysis using Grassgro at key decision making times is a useful aid to farm management

The End

Green Pasture 6 Sept to 1 Feb

“best 10%” “worst 10%” and “average of the past 40 years”

