Quick and Simple Feed Budgeting!

Aim: To answer the questions:

1. **What is the feed situation now?** *Need to work out average cover in kgDM/Ha*
2. **What will the feed situation be in *X* months/weeks time?** *Need to know how much feed will grow, and how much will be eaten.*

Step one: Calculate feed supply

1. **Work out the number of days for the period you are interested in** (e.g. May 1 – Sept 1 = 92d)
2. **Work out average cover today:**
   I. Measure/estimate the cover on 40%+ of the paddocks on the farm
   II. Calculate the average of these (e.g. (2200+1200+1800+1600) = 6800/4 paddocks =1700kgDM/Ha
   III. Validation work done by Farmax has shown that on commercial sheep & beef farms, this method will give an estimation of average cover that is close enough to the true average without including the step of accounting for paddock area. This saves time!
3. **Decide on an appropriate cover for the end of the period;** maybe 1600kgDM/Ha on Ist September.
4. **Subtract end cover from start cover = feed available.** In this case 100kgDM/Ha is available.

5. **Work out what will grow over the period** in kgDM/Ha. Use published tables or local knowledge to estimate the daily pasture growth rate for each month, multiply by number of days and add e.g.

May kgDM/Ha/day	June kgDM/Ha/day	July kgDM/Ha/day	Total Grown
16	9	9	
X 31 days	X 30 days	X 31 days	92 days
= 496kgDM/Ha	= 270kgDM/Ha	= 279kgDM/ha	**1045kgDM/ Ha Grown**

6. **Feed available + feed grown = total supply.** In this example we add 100kgDm/Ha + 1045kgDM/Ha = 1145kgDM/Ha total supply

Step 2: Calculate feed demand

1. **List the stock classes on the property**
2. **For each class estimate/record**
   a. It's liveweight
   b. It's feed demand (kg DM/day) as a % of liveweight:

% LW Intake	2%*	3%*	4%*	5%*
Stock class, comments	Maintenance for adult animals. OK for early – mid pregnancy but then must progressively increase this for foetal growth & udder development	Moderate growth	Very fast growth, mainly in young lambs, (young cattle rarely attain 4%). R1 deer. Ewes in early-peak lactation	Only for a short period in lactating ewes, very fast growing lambs on very high quality feed

*0.5 increments are commonly used, e.g. ewes being fed above maintenance in last trimester may be attributed 2.5%, fast growing 2yo cattle may be attributed 3.5%.

3. **For each stock class, multiply liveweight x daily demand (%LW)** e.g. 65kg ewe x 2% = 1.3kgDM/day
4. **Multiply the number of animals x daily demand;** e.g. 1000 ewes x 1.3kgDM/day = 1300kgDM/day. **(Or you could do this on a per hectare basis)**
5. **Repeat for each stock class**
6. **Sum daily demand for all stock classes = total daily demand.** E.g ewes 1300kgDM/day + cows 700kgDM/day = 2000 kgDM/day

7. **Multiply total daily demand by no. days = total demand**
   e.g. 2000kgDM/day x 92 days = 184000kgDM required
8. **Now divide total animal demand by no. hectares** to bring into same units as supply. The ewes and cows in this example are grazing a 163 Ha block:

184000kgDM/163Ha = 1128kgDM/Ha is required for the period.

The supply calculated above was 1145kgDM/ha, so the feed budget balances.

If the feed budget doesn't balance, need to:
- provide extra feed via supplement or N
- reduce stock numbers
- accept lower final cover and reduced animal performance. But the reason we feed budget is to avoid this situation!!!

For more detailed feed budgeting, including easy incorporation of crops, N, supplement, lots of stock classes or several blocks, try Farmax Lite, or Stantiall & Keeling Feed Budgeting workshops.

Next time we will cover: Assessing how many days grazing is available in a paddock, how to work out a rotation.