



## FLOWERDALE ESTATE ALPACAS

### Nutrition

#### ARE YOU FEEDING MORE AND ENJOYING IT LESS?

##### Feeding, as much an art as a science.

In drought, we need to supplement our critter's food intake. Drought feeding livestock is as much an art as a science. Let us look at what we do, and why.

Alpacas need to eat 1.1 - 1.5% of their body weight each day in order to survive, with an intake of 1.8 - 2.0% body wt. needed to satisfy growth and reproductive needs. That is, a 65 kg alpaca would need 0.7 - 0.975 kg. of dry matter per day in order to survive, but to grow and reproduce it needs 1.17 - 1.3 kg. dry matter per day.

Fresh green grass is usually composed of 90% water and only 10% dry matter, so on a diet of fresh green grass alone your alpaca would need to eat 7 - 9.75 kg. in order to make do, and take in 11.7 - 13 kg. if it is to put on weight, etc. This 13 kg. would contain 1.3 kg. dry matter, which would be adequate, but your alpaca would have to swallow 54 litres of grass to do it!

Fat lambs on the Monaro lose weight during a Spring or Autumn flush of green grass, not because the grass is not nutritious, but because their stomachs just can't handle the volume of herbage necessary to get the nutrition.

Our alpaca, especially the youngsters, show the same weight loss of 2 to 3 kg. Normally they are munching a smorgasbord of small green herbs, young shoots of various plants and "weeds" and varying the intake with mouthfuls of longer, more mature grass, briar, and hawthorn. Currently we still have a small amount of fresh shoot, briar, and hawthorn, with some poa and snowgrass, which contains some 90% dry matter and 10% moisture. A 65 kg. alpaca would need only 1.45 kg. dry matter in order to cope, and indeed one of our groups grazing such pasture for the last four months has been maintaining or slightly increasing body weight and condition.

Once drought really starts to bite there is no growth of fresh pick, so the alpaca are forced to eat older, haying grass. In our case we still have a reasonable supply of this, yet the weights and body condition scores started to drop. Why?

##### Does all feed and grass have the same nutritive value?

NO. Some feeds contain more crude protein than others, and so have greater nutritive value. Adult wethers, sires, and non-pregnant females need feed containing 8 - 10% protein as dry matter. In the first 8 months of pregnancy the gals need to be taking in 10 - 12% protein, with the level increasing to 12 - 14 % in the last 3 months. Tuis need the same level. Lactating hembras need 13 -15% protein intake if they are to produce adequate milk and not lose too much weight, and any crias less than 6 months old that you are supplementary or hand rearing need a 14 - 16% protein intake.

##### So what protein levels can I expect in my pastures?

If you have kikuyu pastures - and they are still growing - it contains approx. 17% crude protein 3 weeks after slashing, dropping down to 11.5% protein 12 weeks after slashing. If you didn't slash last Spring, what is left contains some 8% If you are relying on hayed-off native pasture with no fresh shoot, your animals are ingesting 4 - 8% protein;



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if there is any clover or native legume in it, the crude protein level will be about 11%. A pasture level of 4% is just not enough for maintenance, let alone growth and reproduction.

### So, what do I do?

This depends on whether you still have some pasture, albeit poor quality, that you can supplement, or whether your property is as bare as a saleyard, in which case you will be totally hand feeding. If you are supplementary feeding, use a source of protein that is at least as high as the level you are trying to attain and that is digestible and not likely to cause digestive upsets.

All bags of feed should have a label of analysis which lists, among other values, the Minimum Crude Protein %. The commonest method of supplementation is by feeding pelleted supplement, which is usually easy to dispense, but may be relatively expensive on a per capita basis. Remember that some of your animals will be needing a 14% crude protein intake, so make sure that the product you are buying is labelled as 14% Min. Crude Protein, and that it is formulated for alpaca. It is possible to buy pellets formulated for horses, sheep, or goats which may have a lower protein level, and differing amounts of salt. If you find alpaca pellets with a 10% Or 12% Min. Crude Protein - and there is a price differential, you may consider feeding the lower protein pellets to groups of wethers or your sire, and saving the 14% or better ones for late-term and lactating hembras or weaners.

### The DIY approach.

An alternative is to make your own muesli. Certainly this involves buying different ingredients, but you are the one making changes in the ingredients, not the feedstuff manufacturer. Rather than vary the protein content of the muesli (which you can do if you wish) you can simply raise or lower the protein intake by increasing or decreasing the volume fed. In this case you need to observe the feeding habits in a mixed bunch, to inhibit the "survivors" from hassling the younger and the "genteel" members of the herd.

I use the following mixture: One 5-cup dipper 1250 ml, the old 2 pint measure each of oaten chaff, wheaten chaff, lucerne chaff, and bran; 4 cups 1000 ml of cracked lupins, soaked, and 1 cupful 250 ml of soy meal. Pre-soak the lupins in 5 cups water containing 1 tablespoonful of apple cider vinegar. Why the vinegar? Apart from the beneficial properties claimed for it, it is acetic acid, and the dilute acetic acid solution effectively inhibits any fermentation while the lupins are soaking. The lupins will absorb the water in 2 to 3 hours, but can be left up to 24 hours if necessary. Mix all the dry ingredients, then add the soaked lupins and mix until the mash is uniform and damp. This mixture contains 19% crude protein, and will feed 6 alpaca at the rate of 1 dipper (1250 ml) each. If your pasture is very poor or sparse you can feed night and morning; however, while the alpaca are maintaining body weight, and have a Body Condition Score of 3 or more, once daily feeding should be sufficient.

If you are totally handfeeding, you need to balance the quality and quantity of the feed you are supplying. Improved pasture not containing clover, made into hay, will contain some 8% crude protein; if the pasture included clover, the protein level may well be up around 11%. Good lucerne hay contains 14 - 16% protein, and first quality, well cured, second cut leafy lucerne hay, can test out at 21% crude protein.

A biscuit of this hay 6 cm. thick weighs approx. 1.5 kg and contains 1.35 kg dry matter, which is quite adequate for a 65 kg. Alpaca, which will still feel ravenous because its stomach will think its throat is cut. Adequate nutrition but inadequate daily feed volume intake.



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Don't go to the other extreme and buy large volumes of poor quality or mouldy hay. Feed must be digestible. Pasture hay and other feeds must be at least 60% digestible in order to maintain normal digestive processes, with a 65-70% digestibility needed for lactating mums and weaners. Baled straw and dead grass, containing 4% crude protein, and with a digestibility of 35 - 55% will be next to useless, and if somebody offers you a truckload of shredded wallboard, decline with thanks.

### Are there any other limitations?

YES. If you exceed 20% of pellets or grain in the total daily ration, there will be an inhibition of cellulolytic microbe activity, which will further depress the digestibility of the feed. The diet needs to be at least 25% crude fibre, and of this at least a quarter should be greater than 4 cm long, which precludes a diet of pure chaff - alright for crude fibre, but not fibre length.

Alpaca innards are not really designed for high grain diets, especially large grains. Whole corn in the diet can lead to the formation of stones called gastroliths which can jam in the large bowel, and a proportion of any uncracked grain seems to pass through the critters, much to the delight of the galahs fossicking through the poo-piles. It is better to feed cracked or rolled grain in a long thin line on the ground, rather than in a trough. A large mouthful of grain hurriedly swallowed can lead to choke, which is distressing to the animal as well as the observer. Fed in a long line on the ground means the alpaca has to scrounge smaller mouthfull rather than gulp larger ones.

### What not to do!

- Do not feed urea or diets containing it to your alpaca. Urea is a protein which is useful in drought-feeding cattle, but it can cause severe metabolic upsets to alpaca.
- Do not feed mouldy hay. At best it is unpalatable and will be wasted; at worst it is lethal.
- Do not feed grass clippings given you by well-meaning friends and neighbours; I would even advise you not to feed your own clippings to your critters. Alpaca are very selective grazers, and can isolate one leaf and leave the one next to it - unless your mower has mixed them all up. It only takes one or two leaves from the adjacent azalea or rhododendron bush to kill an alpaca, and you will never see them hiding in the bulk of the clippings.

### Treats?

Traditionally, sheep and cattle owners in times of drought take to the Long Acre, the roadside. You can too! Not by running your stock on the Hume Highway, but by looking out for clumps of lucerne, vetch, and grasses growing at the side of the road. Cut with a breadknife or sickle, they make good supplements for nursing mums and weaners.

Drought feeding entails a continuous evaluation and re-evaluation of your feeding regimes and strategies. You should use regular weighing or Body Score Condition appraisal to monitor the efficacy of your program, and to detect cases early where supplementation is inadequate, usually because the critter is being kept away from food OR WATER by more dominant herd "mates". Do not rely on long-distance visual appraisal!



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