



Browser's Bulletin 39:

Dealing with Drought Conditions in the Hunter

The conditions throughout the Hunter are extremely tough! As if dealing with drought wasn't enough, now some of you are dealing with bush fires and unfortunately we are only at the beginning of summer.

Hopefully you have all been proactive already in planning how you are going to deal with the drought. A drought management plan needs to be flexible as the conditions can change, you need to establish which animals can be culled first of all and assessing available feed and water resources.

It is unacceptable to let your goats die or suffer during drought! It is important to sit down and have a plan of attack.

- Are you going to feed the stock, agist or sell? Part sell and part feed? Agistment is not an easy option with goats as they require goat proof fencing
- How much money are you willing to put into feeding animals before it is time to sell?
- What is your stocking rate? Preventing land degradation and animal welfare issues. The higher your stocking rate the earlier severity and impact of drought.
- What feed are you able to get? Quality? Quantity?

Objectives of drought feeding goats:

- 1) Maintain the welfare of goats
- 2) Maintain the live weight of the goats
- 3) Meet the requirements of does in late pregnancy and during lactation
- 4) Allow kids to grow to their target weight without suffering permanent setbacks

Most producers will aim to keep their breeding stock if possible but when times are really tough you may have to make the hard decision to sell them too. It would be recommended to start culling with the non-breeding animals such as wethers, any of the older does with poor teeth, udder faults or feet faults, any of the shy feeders, cross bred goats and any animal that is in saleable condition for market.

The start date of drought feeding needs to be a part of your drought plan, this could be based on body condition of stock and feed availability. You don't want to wait until there is nothing in the paddocks for them to eat. Start hand feeding gradually and that way they can become accustomed to the feed slowly. Weight and body condition scoring your goats can assist you with herd assessment and correct feeding management decisions. You need to know ideal adult weights, target weight gain in young stock and feeding requirements for pregnant and lactating stock.

Supplementary feeding needs to be done gradually while there is still reasonable paddock feed available. Grains, pellets and sheep nuts are high in starch and low in fibre so a sudden introduction of these feeds could lead to ruminal acidosis (grain poisoning) or enterotoxaemia ('pulpy kidney'). Start by feeding hay that is accessible to all the goats at the same time. Once they are eating the hay, you can slowly introduce the grain. Cereal grains should be started at a ration of 50g/head/day (25g for weaners) and increase slowly (50g every second day (25g for weaners)) until the desired ration is reached. When hand feeding small ruminants you need to keep an eye out for shy feeders. These animals stand back and let the others eat, so separate these animals into another mob and feed separately.

If grain poisoning is detected then the ration should not be increased and roughage (hay) should be provided. Animals with grain poisoning will have a decreased appetite, scours, lethargy and possibly death.

Energy is a major nutrient requirement and normally the first limitation during a drought. It is important to work out the energy requirements for each class of your stock. For example the energy requirements to maintain weight of an adult wether is much less than a late pregnant doe with twins in utero. Other nutritional requirement to consider are protein, roughage, vitamins and minerals.

When determining the daily feeding rations for your stock, the energy and protein of the feed source is required. Feed tests can be done to establish these values, or average tables are available as a rough guide, but the feed values are highly variable especially when the pasture/crops are grown under tough conditions. The aim is to provide the drought feed that provides energy at the lowest cost.

Water consumption, quality and supply are extremely important! When goats are on a hand feeding ration then the water content of the feed will be much less than when grazing pasture and their water requirements will increase. On average the daily water consumption for goats is 4L/head/day but this can change dramatically with the weather. On those extremely hot days their water consumption can jump to 9L/head/day.

Other water supply issues:

- If the water salinity is too high this will not only affect the water consumption but also decrease feed consumption (evaporation over years will lead to increase in salinity of the water)
- Algal growth in high temperatures. Blue green algae can poison stock
- Entrapment in muddy dams: especially with goats as they tend to venture further into the muddy dams with their long legs but they become stuck in the mud.
- Knowing how long your water supply will last (water budget)

How much water is in your dam?

Surface area * depth

Surface area = width*length

Volume= Width*Length*Depth*0.4

(0.4 is to account for the slope of the sides of the dam)

Example: Dam is 30m long and 30m wide and 4m deep

Surface area= $30*30= 900$ square meters

Volume= surface area*depth= $900*4= 3600$ cubic meters

True volume to account for slope of side= $3600*0.4= 1440$ cubic meters= 1.44Megalitres= 1440000Litres

So if you have 100 goats drinking 4L/day= 400L/day

required. You are then able to work out how many days the water in the dam will last roughly. Obviously this is only a rough estimation, because of evaporation and increased requirements of the animals on hotter days and stock requirements i.e. Lactation.



Water test kits are available from our LLS Offices and you can send water samples away to check the water is safe for livestock consumption.

Some Common Diseases seen in droughts

- Grain poisoning from overload of grain
- Enterotoxaemia (Pulpy kidney) from change in diet and not vaccinated
- Worms
- Coccidiosis
- Pregnancy toxaemia
- Plant poisoning and nitrate poisoning
- Urinary calculi on a high concentrate diet
- Vitamin A and E deficiency
- Pneumonia from dry dusty conditions
- Urea poisoning from excess amount of urea

This is just touching on some of the factors that need to be considered during drought times. If you have other questions and concerns about dealing with drought please send me an email on kylie.greentree@lls.nsw.gov.au

References and helpful links:

McGregor, B. 2007. A Guide to Drought Feeding Goats

<http://agriculture.vic.gov.au/agriculture/livestock/goats/drought-feeding>

<https://www.agrifutures.com.au/wp-content/uploads/publications/05-188.pdf>

Dams in NSW; What size are you existing dams?

http://www.water.nsw.gov.au/_data/assets/pdf_file/0010/547237/licensing_rights_harvest_dams_what_size_are_your_existing_dams.pdf

Managing and Preparing for drought: <file:///C:/Users/greentky/Downloads/Managing-and-preparing-for-drought-2018.pdf>

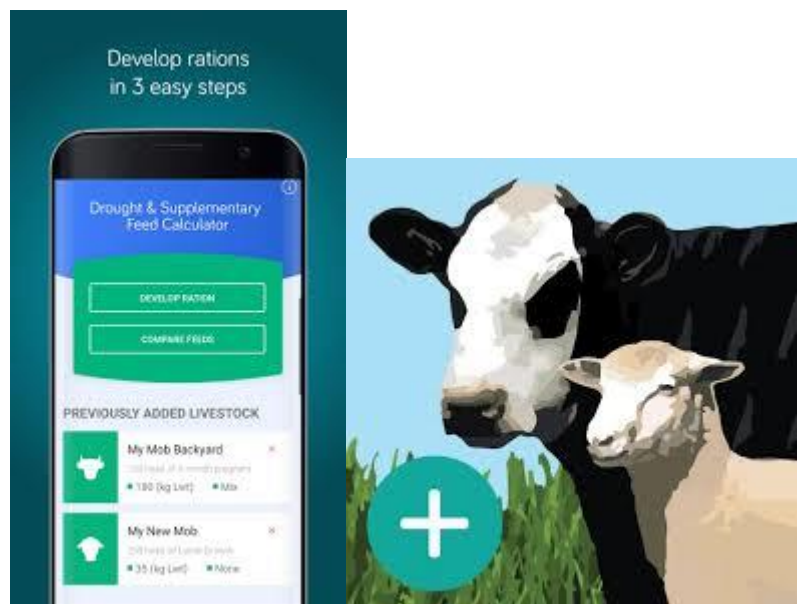
Vitamin and mineral additives for sheep and cattle in drought <file:///C:/Users/greentky/Downloads/vitamin-and-mineral-additives-for-sheep-and-cattle-in-drought.pdf>

Pasture assessment and livestock production <file:///C:/Users/greentky/Downloads/pasture-assessment-and-livestock-production.pdf>

Grain poisoning of cattle and sheep <file:///C:/Users/greentky/Downloads/grain-poisoning-of-cattle-and-sheep.pdf>

Drought and Supplementary Feed Calculator: Get the App <https://www.dpi.nsw.gov.au/animals-and-livestock/nutrition/feeding-practices/drought-and-supplementary-feed-calculator>

The app is designed for cattle and sheep but you could use it on the sheep option and get a rough estimation for your goats.



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