In large parts of the central interior available grazing material is scarce on veld (natural pasture). Prospects for improvement of the poor grazing conditions in the remaining part of summer and winter are not favourable. In addition to current poor grazing conditions, low levels of water in the soil during spring and early summer will also have a negative effect on veld production and livestock. Crops are already affected negatively and therefore crop residues which are usually used as livestock feed will also not be readily available.

The current prevailing situation is not good, but can be managed and the following guidelines may help to prevent mortalities and reduce financial losses:

• Ensure that cash flow is maintained judiciously.
• Safeguard the core breeding livestock. Income must be generated again by these females after the drought.
• Where still possible, provide strategic supplementary feeding on veld.
• Reduce the number of livestock that are dependent on feed sources on the farm by selling surplus animal or by temporary removing them from the veld – to a kraal or planted pasture.
• Restrict movement of livestock by confining them to small paddocks with shade trees or other protection from the elements. This provides better control over the quantities of feed provided daily to the animals.
• Ensure that all animals have freely access to clean drinking water.
• Separate the stronger and weaker animals to reduce competition at the feed troughs.
• Prevent thin livestock, especially cattle becoming too emaciated because of poor feeding conditions and lie down.
• Do not feed animals ad lib. over a long period. Ration the feed according to the required production levels, for example survival or maintenance (maintain body mass) or lactation.
• Do not waste feed by throwing it on the ground – use appropriate feed troughs or conveyor belts.
• Provide the rationed feeds every second or third day. Most animals will receive enough feed. It will also reduce competition at the feed troughs.
• What can be fed? The basis for ruminants is roughage, be it on the veld or in the trough. Coarsely ground roughage is always better utilised (less waste) than in the long form. The energy content can be increased with an appropriate source (e.g. ground maize) and balanced with an appropriate crude protein source. The intake of minerals is then balanced according to the requirements of the animals.
• Feed pellets are merely convenient (transport, handling, less waste) but coarsely ground roughage and properly balanced (discussed above) can adequately meet the requirements of animals.
• Restrict the daily intake of salt (NaCl) for sheep to 5-10 g and cattle to 50-60 g.

Core herds/flocks

• Herds/flocks must be grouped according to age and production status. Determine pregnancy in cattle as soon as possible after the current mating season. With sheep and goats, females can be scanned to determine if they carry twins/triplets to adjust their nutrition level.
• In addition to pregnancy, the condition of teeth must also be assessed, especially for older cows and ewes/does. Pregnant cows must still be able to graze until the next calving and specifically be able to wean the unborn calf. Females with worn teeth can still complete their production in a kraal, but this will have a price tag.
• Create an inventory of all available veld and other feed sources. This information is needed to
determine the number of animals that can be maintained until after well into the next summer.

- Reduce the number of animals dependent on the feed sources by marketing surplus animals or remove them temporarily from the veld. Note the reproduction record and weaning mass of the progeny of females. In each age class the less productive animals must be culled.
- The principle of “cutting-your-losses” applies and all expenses must be weighed and discounted against expected income over the short to medium term. Caution to sell younger breeding animals at a premium because they are in good condition and pregnant.
- Seek veterinary advice regarding any changes in the internal and external parasite control.

**General**

The situation of farmers differ – seek professional advice for assistance with strategic planning. When grazing material on veld is scare licks will not help – often too much supplementary feeding is provided under such conditions on veld. Determine timely when to remove animals from veld and feed them strategically in small paddocks. Plant material may still be available along roads and can be cut and baled. The cladodes of spineless cactus pears can also be used as a good feed source – whole cladodes for cattle and coarsely chopped for sheep and goats. During droughts we cannot be too choosy about the quality of feed sources which can mean the difference between life and death of livestock. If poor quality roughage such as veld grass hay or crop residues or cactus pear cladodes are available, animal nutritionists can use it as basis to formulate diets to meet the minimum requirements of livestock.

**The ruminant**

The plant material selected during drought on poor and dry veld contains little crude protein. The digestive system of ruminants and the symbiosis with microbes in the reticulo-rumen offer opportunity to supplement crude protein with a non-protein nitrogen (NPN) source such as feed grade urea. The microbes in the reticulo-rumen break cellulose (fibre) down and produce new nutrients (volatile fatty acids and microbial protein). The complex four compartment “stomach” develop gradually from the suckling phase (basically still monogastric) to that of a physiological mature ruminant. In younger calves and lambs/kids the reticulo-rumen is still in the process of developing. Therefore, it is better to use natural and higher quality protein sources instead of NPN; bypass protein may also be supplied strategically.

**Supplementary feeding (licks)**

It is important to address some critical questions regarding a supplementary feeding programme:

- What is the aim with the supplementation? Must protein, energy, a combination of protein and energy, or minerals be supplemented? Should animals gain in condition or must dry animals maintain mass (maintenance) or must lactation be supported? Animals in different production phases thus require specific types and quantities of strategic supplementary feeding.
- How can the aim be achieved best? Have the less productive animals been removed to make all grazing available for the remaining livestock? This option is still not used to the best advantage and can make a great contribution to improve the efficacy and also lower the cost of supplementary feeding to the remaining animals.
- Can it be ascertained whether the aim has been reached? Most well-intended programmes to improve animal performance fail in this regard, because the recommended level of supplementation is seldom achieved. Intake of supplementary feeding varies and is affected by feeding space (number of animals/troughs), access to troughs (dominance between animals), level of supplementation and how often the troughs are filled.
- Unless the provision of supplementary feeding is managed, some animals will consume too much while others ingest too little to benefit at all.
- Do not feed animals aimlessly on veld.
- A range of products are available; seek advice from a professional animal nutritionist regarding
the options and products to be considered.

- Animals may lose body mass in moderation (10-15%), but then it must take place over a relatively long period and under control of judicious nutrition management.

### Veld fires

- Runaway veld fires or accidental fires can change the current precarious drought situation into a real crisis. An area where veld has burnt is practically in a disaster drought situation.
- Make effective fire breaks, especially along roads, around dwellings and ash dumps. Roads are not good fire breaks because the road surface is smooth and embers are easily blown over it by strong wind. Fire also spread easily through culverts.
- Veld fires suppress grass production for about two seasons. Therefore, veld must rest at least one growing season after an accidental fire and at least one growing season before a planned burning of the veld.

### In closing

Production and reproduction of cattle are usually affected by drought and the get ill easier; the extent will depend on the severity of the drought conditions. Lactating cows, late pregnant heifers and weaners are the most vulnerable because of higher nutrient requirements. A good understanding of these factors is needed for a cost effective management strategy to mitigate the effects of drought on animal production, reproduction and health. The following general aspects of management may be considered for beef cattle:

- Determine pregnancy of cows and heifers as soon as possible (8 weeks for cows and 6 weeks for heifers) after the bulls have been removed. Non-pregnant animals are identified for culling and the stage of pregnancy (early, mid and late conception) relative to mating determined.
- This information and body condition can be used to identify cows that may benefit from early weaning and/or strategic supplementation as well as those to be sold. Informed decision making create opportunity to lessen the effects of a drought.
- Sheep/goat production can benefit from early weaning of lamb/kids – the ewes/does can be fed at lower maintenance levels and lambs/kids finished in a feedlot.
- Animal health starts at the mouth; good nutrition is the basis of healthy animals and production. Changes in management may require adjustments in the programme for the prevention of diseases (inoculation). Remember, inoculation is a simple action (an injection), while creating immunity is a more complex process in animals which requires protein (amino acids in the diet) to produce the antibodies. During droughts and dry seasons the protein content of veld is generally low. Timely inoculation may be considered to ensure the development of better immunity.
- Drastic changes in management such as restricting animals in kraals increases stress and susceptibility for diseases. The incidence of opportunistic diseases may increase and require inoculation which is usually required. Specific local conditions and circumstances will dictate any changes in inoculation as well as external and internal parasite control programmes. Discuss any possible changes in the animal health and disease control programme with your veterinarian.
- Vitamin status must be evaluated and supplemented.

We wish you success with the livestock enterprise.

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