INTRODUCTION

From a literature review and farmers' observations, Opperman and La Grange (1969) concluded that losses of livestock due to gifblaar poisoning were considerably increased by poor management practices and overstocking. Based on the fact that the highest infestation of gifblaar occurred mainly on the northern slopes of dunes, and that gifblaar was not necessarily poisonous throughout the year, they were convinced that livestock mortality could be restricted by judicious management practices. Therefore, a trial to test judicious management as a measure to reduce livestock mortality due to gifblaar poisoning was launched at the Sonop Research Station. The main objective of the trial was to fence off dune areas (where gifblaar concentrations were high) from areas between the dunes (where little or no gifblaar occurred). These two areas were grazed separately by cattle at three stocking intensities. The camps were grazed according to the conventional two-camp system - the only difference being that the camps with gifblaar plants were not grazed during the critical sprouting period. The gifblaar-free camps were unfortunately grazed during spring every year. The control group grazed a partially infested camp continuously at a low stocking rate.

RESULTS

There were no mortalities at any of the stocking intensities. The higher intensity caused the rangeland to deteriorate drastically and compromised the performance of individual animals. However, the production of the individual animals per hectare was higher. The weaning weights of the calves in the higher grazing intensity camp also tended to be lower.

From the results obtained at the Sonop Research Station and from observations during the trial period, Opperman and La Grange (1969) concluded that judicious management could indeed reduce and even stop livestock mortalities due to gifblaar poisoning. The main objectives of judicious management would be to avoid overgrazing even in areas that were slightly infested with gifblaar, and not to graze heavily infested areas at all when the plants were sprouting. In addition, areas were to be rested in order to accumulate sufficient grazeable material that could be utilised during the critical periods when plants were at their most poisonous. Animals that were agitated, under stress or ill were likely to die after ingesting gifblaar. Animal health was, therefore, a prerequisite.

RECOMMENDATIONS

A set of guidelines and recommendations were compiled to assist farmers (Opperman & La Grange 1969).

Animals that were adapted to the area would not eat gifblaar if sufficient grazeable material was available. It is, therefore, of utmost importance that sufficient grazeable material is made available. The toxic substance, monofluoroacetate, is highest during the spring when the plant sprouts and most of the other plants are still dormant. As the plant matures, its toxicity declines. Mortalities are less inclined to occur when gifblaar sprouts for a second time during the autumn. Based on these findings, the management procedures that are recommended are as follows:

- Farms need to be planned and fenced in such a way that poison-free camps are made available for the dry periods of early summer and spring when the gifblaar sprouts. A good system of range management is essential, and sufficient numbers of camps need to be provided.
- Animals need to graze gifblaar-free areas during the most critical period, namely for two to three months in spring, when the plants sprout.
- Certain areas or camps should be rested to build up sufficient grazeable material for animals to graze during periods when gifblaar is at its most poisonous.

Dichapetalum cymosum. Known as poison-leaf in English, the plant is more commonly referred to by its Afrikaans common name, gifblaar or magon.
If grazing in areas infested with gifblaar cannot be avoided during critical periods, the animal stocking rates should be low and the camp should not be heavily grazed. It is recommended that stocking rates should at all times be adapted to the amount of available grazable material.

If possible, areas that are free of gifblaar should be separated by means of camps from areas that are infested with it. If this measure cannot be taken, the areas should be grazed, taking into account the cautionary steps suggested above.

Overgrazing has to be avoided at all costs. Not only is it uneconomical, since production per animal drops, but weaning weights are also reduced and the rangeland is damaged. This makes a farmer more vulnerable to periodic and disastrous droughts.

Animal numbers should be adjusted each year according to the grazable material available in order to avoid overgrazing and the chance of animal losses through gifblaar poisoning.

Because the physiological processes and health of grazable plants need to be complied with, resting of the rangeland is of the utmost importance.

If late rains precede winter, a good spring sprouting of gifblaar and forage bushes can be expected. However, in some years, spring is dry and the quality of the grazing is such that animals cannot ingest sufficient feed for maintenance. They will then search for green growth – resorting to gifblaar, which sprouts earlier than other plants.

Protein-rich supplementation licks are essential during the dry, winter season, and should be provided from the beginning of the season.

The largest proportion of animal losses occurs when animals are handled or after handling, e.g. dosing or chasing them. It appears that if an animal has ingested a threshold amount of gifblaar that would not normally affect it, it will suffer from acute poisoning and die due to the physical activity.

When animals graze gifblaar-infested areas, handling needs to be reduced to a minimum; any handling that is necessary should be well planned and executed.

Cows, especially pregnant ones, were found to be more susceptible to gifblaar poisoning than male animals.

- If sufficient gifblaar-free camps are not available, preferential access to available camps or gifblaar-free areas needs to be given to female animals.
- Another option, where possible, is for planted pastures to be grazed during critical periods.
- Supplying extra feed and, especially, a protein-rich supplement to female animals during critical periods may also be an option. However, purchasing the extra feed and supplement is costly.
- Additional feed and protein-rich supplements can be applied to all farm animals during critical periods.

Other management aspects that need to be taken into consideration in order to reduce livestock mortality are as follows:

- A health care programme is necessary.
- Animals should not be kept in kraals for extended periods, as is the case when animals are milked.
- Animals need to have free access to licks and water in order to avoid agitation and stress.
- Where possible, water points and kraals should not be erected in a gifblaar-infested area. In many cases this may not be possible, however, such areas can be cleared by means of the various methods described above.

Animals that are chased from one place to another tend to grab any plant in sight while being chased. In the process, gifblaar plants are also ingested.

- Service corridors (passages) can be erected to ease animal movement on the farm. These areas can also be cleared of gifblaar by the different methods of eradication. These corridors should also be rested at certain times and could serve as grazing during critical periods.

From research it has been established that game is less susceptible to gifblaar poisoning than cattle and goats are (Basson et al. 1982).

Game farming could, therefore, be a way of avoiding large-scale animal mortalities.

References


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