



# Emergency: Drought Management Newsletter



As the days continue to be hot and dry, with little rain relief in sight, producers must start to develop a drought management plan. Drought forces producers to establish procedures that deal with balancing the amount of forage required by grazing livestock with the amount produced.

While an easy fix would be to purchase feeds, trying to feed the whole herd through a drought with purchased feeds can be financial suicide. The real solution is to have a drought management plan which should focus on three major categories of concern:



Livestock Inventory,  
Water Quality &

Forage Resources/Alternative Feeding Programs.

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# Livestock Inventory & Water Quality

Jenna Innes, DVM

Adjusting livestock inventory numbers to properly manage the resources that are available is usually the most economical alternative during a drought. Depopulation is the initial



Photo: Bordermail.com

step in adjusting livestock inventory. The most obvious

cows to cull are those with physical impairments, open or late calving cows, and older cattle. Culling early is beneficial, to avoid selling when prices are low due to increased supply of cattle. That being said, **early** pregnancy checking



Photo: CattleToday.com

becomes invaluable as a means to determine open and late cows. Pregnancy checking can be done as **early as 30 days** after bull removal to determine pregnant/open.

After the initial adjustment, consider further culling low producing females. Individual production records come in handy to identify those in the bottom 15 – 20% of production. Another option may be keeping fewer replacement heifers, or none at all, as heifers require high quality feeds and forages without a reproductive history.

Early weaning is also a common strategy for adjusting livestock. Weaning calves early reduces the amount of feed required to maintain the cow, as ending lactation reduces the cow's nutrient requirements. Early weaning is more effective than creep feeding as lactational pressure is not removed from the cow when calves are creep-fed. Data suggests that there is a one day increase of grazing available for a cow, for every 2.5 days that a calf is weaned (Rasby).

Additionally, some data has shown that early weaned calves have a tendency to grade USDA choice or higher, under the proper diet. Those weaned early are generally more efficient at gaining compared to calves weaned at older ages, as long as they are exposed to a high energy diet. However, light weight calves do tend to be more susceptible to health concerns related to dust and heat stress. Therefore, ranchers should consult their veterinarian for a vaccination and health plan specifically designed for their operation and early weaning.

## Water Quality

Another variable to consider in a drought management plan would be water access and quality. Drought conditions can compromise water quality in surface water. When water evaporates it can raise the amount of salts, minerals and bacteria to dangerous levels. Testing the quality of water in ponds and dugouts is highly recommended before turning livestock out to pasture.



Photo: dreamstime.com

When testing water, three main areas of importance are total dissolved solids, sulfates and nitrates. Try to obtain a sample as close as possible to the middle of the water source, as samples collected from the edges may be falsely increased. Water samples can be dropped off at WRVC for testing.

Increased sulfate levels in water tend to be of the most concern. As sulfate levels go up, dry matter intake goes down, resulting in weight loss. When cattle are in a negative energy balance and losing weight, reproduction is drastically affected. In bad water situations, it is not uncommon to see 20 – 40% of the cows being open, which is another reason preg checking can be invaluable during a drought situation.



Photo: mtbr.com

Additionally, elevated levels of sulfates will bind with some minerals, including copper, thereby reducing its availability to the body. Increased sulfate may also result in loose stools and at extremely high levels it can cause neurologic issues, including polioencephalomalacia. (polio)

Nitrates are not routinely toxic to animals, however, at elevated levels we can see nitrate poisoning. Nitrate poisoning can result in lower milk production, increased susceptibility to infection, retarded growth and abortions, vitamin A deficiency, difficulty breathing and even death.

Water is an important nutrient that often goes overlooked. An adequate and safe water

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Water Quality continued

supply is essential to the production of healthy livestock. If concerned about livestock affected by contaminated drinking water, contact your local veterinarian to discuss further diagnostics and a treatment plan.

## Forage Resources/Alternative Feeding Programs

Making the most of existing forage resources is also a big component of a drought management plan. One of the best means to use resources efficiently is by cross-fencing pastures. Splitting larger pastures to concentrate grazing, reduces the selectivity of a cows grazing habit and encourages them to more completely use the limited forage available. Rotationally grazing smaller paddocks also allows a rest period for the grass, allowing it to accumulate more growth before being grazed. It is important to allow enough time for adequate plant recovery as overgrazing affects the entire rangeland plant community.

According to Miranda Meehan, NDSU Extension livestock environmental stewardship specialist, overgrazing can “reduce species diversity and biomass, increase soil erosion and weed growth, and reduce soil water-holding capacity”. Overgrazing not only effects current forages, but can damage the soil and reduce future regrowth.



As drought is usually not a wide spread climate condition, it may be economical to lease additional pasture in a less affected area. In this case, make sure all parties understand the terms of the lease and make clear who monitors the cattle, water and supplements. See our article on rules and regulations for moving cattle across state lines. If relocating only part of the herd, make sure to establish a biosecurity plan for when the cattle return. It is best to isolate the returning cows for a quarantine period, when they arrive.

Purchased feeds and supplements often become a big topic during drought conditions. During a drought, many nutrients become deficient in our pastures and drought stricken hay. Some of the most relevant nutrients that become insufficient include: zinc, copper, selenium, Vitamin E and Vitamin A. Deficiencies in nutrients can have drastic effects on livestock, including reduced fertility and increased abortion, low quality colostrum, compromised immune system, and poor response to vaccines. One must also consider that cattle deficient in vitamins and minerals calve offspring that are also deficient in these same vitamins and minerals, so this problem may persist long after the drought has subsided.



Photo: toddklassy.com

If there is still grass available in the pasture, it is not recommended to supplement with grain such as corn, as corn will actually reduce forage digestibility, therefore not extending the life of the pasture. Moreover, supplementation with a protein cube actually increases forage intake. To extend existing pasture, feeding alfalfa hay is recommended. Alfalfa hay provides some energy and protein, but it also fills the rumen, which reduces pasture intake. Unfortunately, alfalfa goes dormant in drought situations and it is recommended to leave it uncut until rainfall, if it is not at least 12 to 15 inches tall. Clipping or harvesting droughty alfalfa would cause additional stress on the plant, reducing future regrowth and possibly causing plant death.

Dry lotting cows may be another option in drought conditions. Feeding high energy feeds in a limited ration can decrease the amount of feed needed, while still maintaining the cows' nutrient needs. Having plenty of bunk space is important when limit feeding a high grain diet, so timid, young cows do not get pushed aside. Plenty of bunk space also helps decrease the



Photo: beefambassador.com

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# Rules & Regulations for moving livestock between North and South Dakota

Jenna Innes, DVM

Forage Resources/Alternative Feeding Programs Continued

chance of acidosis, while also elevating the efficiency of use of the ration by the cows. These rations will need to be fed daily, with initial feedings recommended twice a day to allow the animals to adapt, which can be very labor intensive.

If considering an alternative feeding program, contact your nutritionist or WRVC and we can assist you in setting up a nutrition consult.

Examples of some common ionophores



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## Rules & Regulations for moving livestock between North and South Dakota

While crossing the state line may seem like an everyday occurrence to a lot of people in this area, many do not realize that livestock do not have the same ease. These days with requirements ranging from healths and brand inspection, to trichomoniasis and Brucellosis testing, it can be difficult to keep matters straight. Here is a quick reference for moving cattle and sheep between North and South Dakota. Please feel free to contact us at WRVC for any questions regarding health certificates and interstate travel.

All cattle leaving either North or South Dakota are required to have a brand inspection. On the same token, almost all livestock entering either North or South Dakota, are required to have a certificate of veterinary inspection (CVI), more commonly known as a "health certificate." Exceptions for required health certificate include:

- Cattle consigned to an auction market approved by the board, originating directly from the producer's premises
- Cattle consigned to a state or federally inspected slaughtering establishment
- Cattle granted an exception by the board
- Cattle leaving the state for exhibition or competition with a valid CVI, may **return** to the state with the same CVI if the animal has not been out of the state for more than **30 days**.



### North Dakota to South Dakota



Moving Beef Cattle and Bison from North Dakota to South Dakota

- Calves (2 months of age and younger) – Need a health certificate
- Feeder cattle and bison (2 to 18 months) – Need a health certificate.
  - Suckling calves may travel on their cows ID and test information
- Cattle on a **grazing permit** can travel into South Dakota on a brand inspection and health certificate (without individual identification), however, returning to North Dakota requires individual identification. Producers should consider individually identifying cattle before taking them to grazing, depending on their facilities at the location in SD. The grazing permit is valid for 180 days, however, livestock will still need to be inspected within 30 days of travel (no need to be individually identified if done previously for the grazing permit).

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# Rules & Regulations for moving livestock between North and South Dakota

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- Breeding Cattle and Bison (over 2 months) and intact feeder cattle and bison over 18 months – Need a health certificate and individual identification.
- Bulls – Health certificate and individual identification (required in most cases).
  - Trichomoniasis testing: The state requires a negative test, which is valid until the bull has returned to breeding activity.
  - Exempt from Trichomoniasis testing:
    - Virgin bulls
    - Bulls imported for confined feeding or slaughter only
    - Imported for exhibition or rodeo purposes and held in confined facilities to prevent breeding
    - Those imported as part of seasonal grazing operation and not changing ownership, as determined by the board



Photo: aib.sd.gov

## Moving Sheep from North Dakota to South Dakota

All sheep movement requires a health certificate and all breeding animals must be officially identified (scrapie tag or tattoo). Rams that are 6 months or older must be negative for *Brucella ovis* within **30 days** prior to entry or originate from a *B. Ovis* free flock with a test record within the past year

## South Dakota to North Dakota

### Moving Beef Cattle from South Dakota to North Dakota

- Calves (2 months of age and younger) – Need a health certificate
- Feeder cattle (2 to 18 months) – Need a health certificate.
  - Suckling calves may travel on their cows ID and test information.
  - Female cattle over 12 months of age are required to be bangs (brucellosis) vaccinated. Exceptions to this rule include:
    - Spayed females
    - Cattle affected by drought conditions when:
      - Drought conditions render pasture and feed supplies inadequate for ND producers to maintain their breeding herds
      - It is necessary that ND cattle producers to secure out-of-state grazing or feeding facilities for their breeding herds; and
      - The cattle are owned by ND cattle producers with the intent to return the cattle to the ND producers' premises upon completion of the grazing period
- Cows - No nonvirgin and nonpregnant female cattle may be imported for breeding or grazing purposes, unless accompanied by own offspring and prior to rebreeding.
- Bulls – Health certificate and individual identification. Most cases require Trichomoniasis testing.

- Trichomoniasis testing: Required on bulls over 24 months of age and all nonvirgin bulls over 12 months
- The state requires a negative test within **sixty days** prior to entry.
- Exempt from Trichomoniasis testing:
  - Virgin bulls 23 months and under
  - Those going to immediate slaughter or consigned to slaughter establishment
  - Those approved by state-veterinarian for seasonal grazing, exhibition, etc.

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Photo:  
unitedbuckingbulls.com



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# Rules & Regulations for moving livestock between North and South Dakota

Cont.

## Moving Sheep from South Dakota to North Dakota

All sheep movement requires a health certificate, with the same exceptions as cattle. All breeding animals must be officially identified (scrapie tag or tattoo). Rams that are 6 months or older must be negative for *Brucella ovis* within **30 days** prior to entry. Rams that are 1 year or older need a negative *B. ovis* test result or originate from a *B. Ovis* free flock with a test record within the past year



Photo: extension.umd.edu

For more information on North Dakota import rules:

<http://www.legis.nd.gov/information/acdata/pdf/48.1-05-01.pdf>

For more information on South Dakota import rules:

<http://www.aib.sd.gov/imports.html>

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