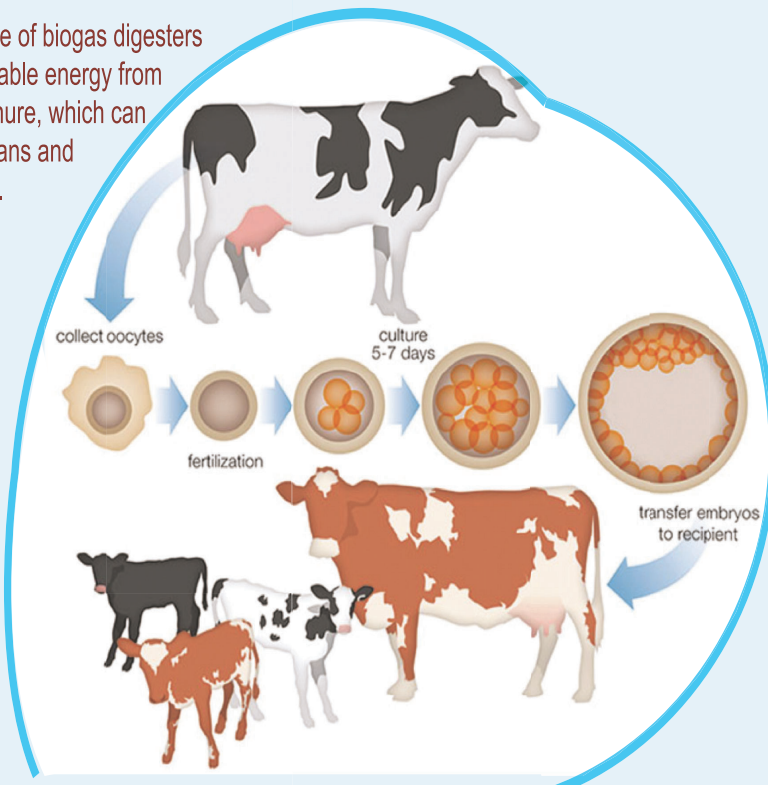


Veterinary inventions

- The objective of veterinary interventions is to assist farming communities to combat disease in their most vulnerable livestock
- By improving survival of breeding stock, by putting in sprinkler system, which will allow for rapid recovery of herds and livelihoods post drought
- To facilitate in the prudent use of veterinary drugs treatment of farm animals
- Promote the use of climatic tolerant breeds
- Increase livestock through artificial Insemination and Embro transfer
- Encourage the use of biogas digesters to produce renewable energy from pigs and cow manure, which can be use to power fans and sprinkler systems.



Veterinary Services Division MANDATE

- Keeping exotic diseases out of Jamaica
- Safeguarding the Livestock Industry
- Facilitating Trade
- Improving Public Health
- Enhancing Food Safety
- Promoting Animal Welfare

FOR MORE INFORMATION PLEASE CONTACT US AT:

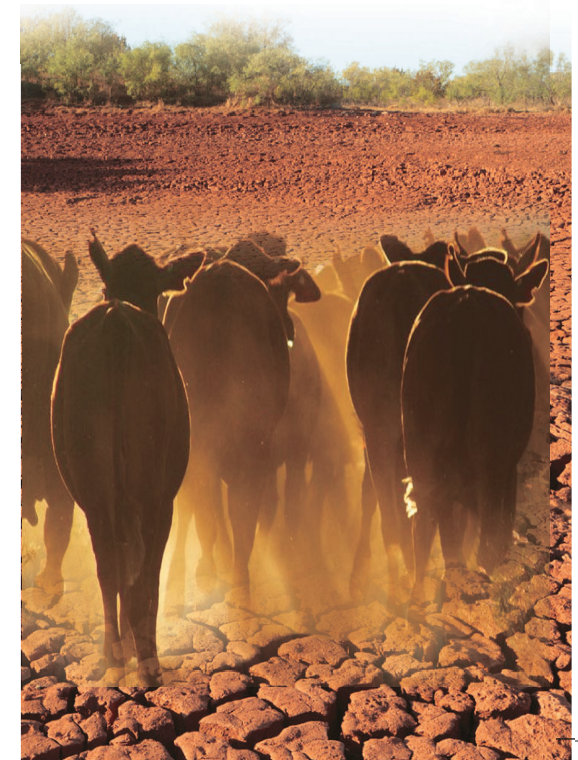
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Ministry of Agriculture,
Fisheries and Mining
VETERINARY SERVICES DIVISION

CLIMATE CHANGE
Drought Mitigation in Livestock



LIVESTOCK

IN

AGRICULTURE

Livestock Production

Livestock feeds and clothes the world. Changes in our climate could have on a negative effect on Livestock production:

- **Weather patterns**
- **Temperature**
- **Rainfall**
- **Water availability**
- **Crop growth and quality**
- **Livestock Health**
- **Pest**

Why do we care?

Climate change could affect farming practices, and result in an increase in pests infestation which carries disease.

These could in turn, affect the availability and price of agricultural products as well as the costs of doing business.

Increased air temperature may cause more stress on livestock.

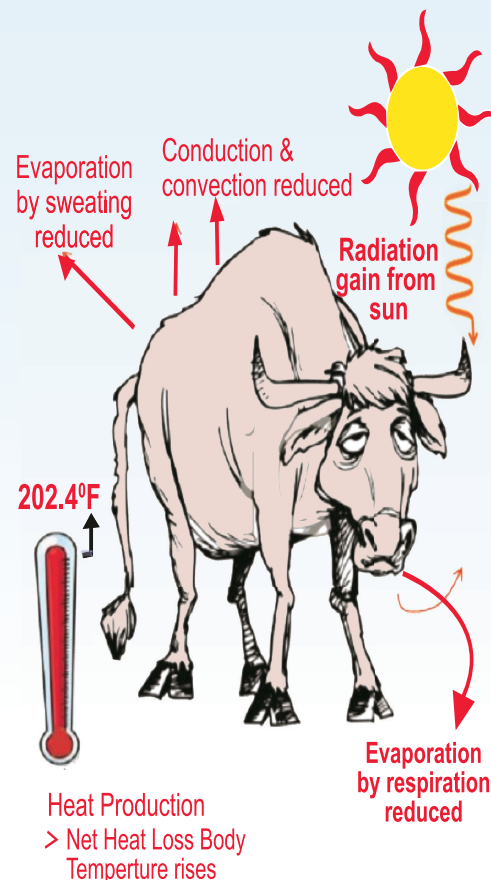
Both humans and livestock are warm blooded animals, so both will be affected by heat and humidity.

In stifling heat, livestock reproduction declines as well as their appetite.

Increase in death rate of animal.

Animal Production

- **Extreme heat** generally results in higher animal mortality- Keep the animals cool
- **Economic impact** on production such as daily reduction of weight gain and feed conversion efficiency
- **Impacts immune** system making animals more susceptible to disease and stress
- **Heat, humidity** and moisture accelerate pest and disease cycles



Farm Impact

- Drought and heat can devastate pastures or create grain and hay shortages, increase in cost.
- High temperature increases water consumption of animals.

Impacts on Feed Quality

- Increase of carbon dioxide may result in feed and forage that is less nutritious.
- Growers may be forced to use feed additives to see gains in livestock and to avoid illnesses

Impact on Fisheries

- Some diseases that affect aquatic life may increase
- Changes in temperature and seasons could affect the timing of reproduction and migration

Impact on Disease

- ✓ Insects, parasites and diseases could become more prolific as drought progresses
- ✓ New diseases may emerge
- ✓ Increase in humidity, cause stress on livestock resulting in the industry to fight diseases.

Air temperature = 85° F
Relative humidity = 50%
COW IS UNDER SHADE

