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Livestock products continue playing a vital role towards global food security through provision of meat and milk, a good source of protein.

Numerous people are directly or indirectly linked to livestock production since it provides sustainability of livelihood through employment creation.

Livestock is subsistence matter both to a farmer on a ranch directly working with beef or dairy cattle and a yoghurt processor in a dairy company somewhere in the city.

The demand for dairy products continues escalating, as well as non-food products such as hide and manure that are also obtainable from cattle around the world. Manure is a source of fuel, used in households and backyard farms.

Today's edition sheds light on the impact of climate and climate change on livestock productivity, with particular focus on cattle.

How is livestock production affected by climate change?

In general climate is the average weather condition in a particular area, often articulated as expected temperature, rainfall or wind conditions

with reference to past records. Such that, ‘climate change’ is defined as variability in climate that persists over a prolonged period.

Climate change is predominantly triggered by greenhouse gas emissions which result in global warming.

Ironically, the **livestock industry significantly contributes towards greenhouse gas emissions** through escaping ammonia found in cattle manure. **Ammonia emission** results in atmospheric and water bodies’ pollution. Imagine a contaminated water source, used for drinking and watering a lucerne field. High quantities of ammonia cause poor lucerne growth, resulting in less forage material for your cattle. In terms of contaminated water sources; water borne diseases may be a challenge to a farmer due to excess ammonia in water for drinking by your cattle.

Cattle may succumb to **heat stress** as a result of stealth change in temperature, which reduces production more especially among dairy cattle. Furthermore, routine movement of cattle to abattoirs can be affected as a result of extreme high temperatures, which may significantly distort meat quality.
Cattle with underlying **diseases** may die due to high and prolonged temperatures due to poor temperature regulation.
In the long run, excess heat accompanied by **prolonged droughts** suppresses livestock sustainability, due to competition for resources (forage and water) on ranches. Hence, **destocking could be adopted** so as to ease pressure on both animals and environment.

Furthermore, food security for the growing population is adversely disturbed by climate change, as livestock productivity is negatively affected and mere sustainability is a challenge for most livestock farmers around the globe.

What can be done to mitigate the effects of climate change on livestock production?

Implementation of **"Smart farming" and "Sustainable Farming"** around the world, could help farmers minimize contamination of the environment through ammonia emission. Such that, through collective efforts among farming communities, ideas can be shared to improve and sustain good cattle production.

On a ranch, it is always advised to leave some trees uncut, so that they provide **shed** for foraging cattle. And in intensive units, areas with sheds are encouraged to minimize heat stress on animals.

To sum it all up, **climate change is a subject under discussion and as livestock farming communities, we ought to practice smart farming** and constantly engage with the global village on ways to counter climatic conditions and all changes associated with it.

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