Improvement programmes of breeding are necessary to increase and sustain the productivity of livestock to meet consumer demands.

Today’s edition focuses on the utilization specific techniques and subsequently how the optimization of breeding can increase animal production.

Drift in climatic conditions over the years, characterized by drought, heavy rainfall that led even to the spreading of diseases, has adversely affected the livestock sector. As a farmer, concerns arise on how to best tackle these challenges.

Stocking rates, improved breeding schemes, feed regimes, deoxyribonucleic (DNA) techniques and good animal husbandry practices have been put in place to enhance success in the agriculture sector in the world.

Sustainable **stocking rates** are a key component as they improve the status of a rangeland. Numerous grass species grow and depletion of some species is minimal, however, in a scenario where continuous overgrazing occurs, certain grass species tend to become extinct. Therefore, an ideal number of a herd that can be sustained on a range must be kept.

- Overcrowding of cattle, sheep, or goats on a rangeland strains the
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environment.
- Implementation of grazing regime, namely rational grazing can prevent excessive soil exploitment.

**DNA tests** are conducted on domesticated animals for disease surveillance and this strives towards herd health. Scientists ensure that tests carried out help breeding communities with vital information that is needed. In so doing, DNA gathered data is stored and can be used by the global community.

- Tracing of paternity among domesticated species can help optimize the offspring’s resistance and adaptability.

The advent of strategic breeding schemes has facilitated the success of developing composite breeds that are adaptable to the different environmental conditions. Huguenot cattle are a cross between the Charolaise and Afrikaner uniquely characterized by easily adapting (hardiness) to arid and semi-arid terrains. Furthermore, the Beefmaster a across between Hereford, Shorthorn and Brahman, is known to be heat, drought and insect resistant.
These breeding schemes have helped the livestock industry to successively grow.

- Use of artificial insemination to increase production for example dairy breeds.
- Use of prolific breeds in poultry for egg production.
- Intensification of production to maximize profits.

Cheaper feed regimes such as consumption of crop residue by domesticated animals helps cut cost from the farmer’s pocket. Maize, millet, sorghum stocks, leguminous plants make part of affordable feed
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regimes. Cattle, sheep and goats consume these crop residues. Through extension services, farmers are taught how to improve crop residues to enhance nutrient composition by making silage. Silage is defined as fodder made from green foliage crops that are preserved by acidification through fermentation.

Strategic mating to match calving season to the prevailing environment conditions to reduce associated feed costs. Moreover, use of these feed regimes facilitates the success of running a range.

General handling and care of animals makes part of good husbandry practices increase animal productivity on a farm. Examples include, easy access to clean water, feed and shelter for the young domesticated animals. Therefore, efficient utilization of the resources available around ensures success of a farmer.

- Adhering to the five animal freedoms is vital.
- Efficiency in treating, monitoring and isolation of the sick reduces spread of diseases.

The art of managing a rangeland lies within each farmer, such that constant consultation and communication with the global village ensures its success.

References

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