*Mubende goat breeds reared at Makerere University's Agricultural Research Institute.*
*PHOTO CREDIT: LOMINDA AFEDRARU*

# Satisfying Uganda's hunger for quality beef

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African countries are grappling with meat quality challenges, including poor infrastructure for animal husbandry and processing, inadequate hygiene and handling at abattoirs and butcheries.

These challenges lead to health risks for consumers, post-harvest losses for livestock farmers and limited access to lucrative markets.

The proprietor of Uganda's Bole Farm Ltd, Dr Mukas Mugerwa, said in an interview with PanAfrica Agriculture that the most meat consumed in the country is beef with varying qualities depending on the cattle breed and animal husbandry parctices.

Uganda has about 14. 5 million cattle, 16 million goats, 4.5 million sheep and 47.6 million poultry.

Most livestock farmers are from the cattle coridor in the districts of Isingiro, Masindi, Kiruhura, Lyantonde, Mubende, Kibaale, Nakaseke, Kyakyanzi, Masindi, Kiryadongo, the Karampja region and Nakasongola.

Beef accounts for 59 percent of total meat production. The offtake for cattle slaughter in the country is 8.0 percent, amounting to 1,136,000 cattle slaughtered every year.

The average carcass weight is 185 kg, resulting in annual yield of 210,160,000 kg beef. The annual value of the beef industry stands at approximately US$500 million.

Farmers who are practising zero grazing tend to breed specific number of cattle that are well fed, leading to good quality beef.

However, animals reared by pastoralists tend to have their meat quality compromised due to shortage of pasture and water.

Factors affecting meat quality

One major factor affecting meat quality is lack of modern infrastracture, including slaughter houses which lack modern equipment for meat processing.

Others are poor storage facilities such as cold rooms, leading to meat spoilage and inhygienic handling practices in butchers and abbatoirs.

The prevelance of diseases such as foot and mouth disease (FMD), tick-borne diseases and African swine fever reduce livestock productivity and quality.

Inadequate veterinary services in rural areas and the high cost of drugs make disease management difficult.

Meat quality assessment

Meat quality in Uganda is assessed

through a combination of official meat inspection agencies.

According to Uganda's meat code, all meat must be inspected by authorised personnel and certified as fit for human consumption. Uninspected carcasses are not permitted on butchery premises.

The Uganda National Bureau of Standards (UNBS) sets national standards which cover hygiene and safety requirements.

Regulatory authorities, including public health and veterinary departments, are responsible for monitoring and enforcing these standards in slaughterhouses and butcheries.

The primary focus of the official assessment is the hygiene and sanitation of facilities, equipment such as knives and cutting surfaces and personnel to prevent contamination with pathogens like E. coli and Salmonella.

However, studies have indicated that adherence to these practices is often poor in many traditional butcheries.

Carcass grading is done based on characteristics of the animal such as size, muscle volume, fat cover and intramuscular fat distribution.

Others are physical measurements such as tenderness of the beef and microbiological laboratory tests to check for harmful bacteria.

Good animal husbandry practices

Denis Mpairwe, an associate professor at Makerere University College of Agriculture and Environmental Sciences, observes that Uganda's 14.5 million cattle population is raised for meat.

Pastoral cattle rearing comprises 41 percent and contributes 19 percent of farm income, agro-pastoral has 49 percent and contributes 12 percent of farm income, ranches stand at 8.0 percent, contributing 45 percent of farm income and semi-intensive production system at 2.0 percent, contributing 75 percent of farm income.

Prof Mpairwe explains that for a farmer intending to rear good breeds of cattle, it is important to determine how many animals can be accommodated on a specific piece of land.

Feed management

Experts contend that a farmer who is aiming at feeding his cattle at all times must determine availability of pasture and other additional nutritional feeds.

The pasture can be on an established farm meant for growing pasture or improve on the existing pasture by planting improved grass and legume species.

It is important to plant legumes such as Lablab, Calliandra and Centrosome and grass species such as brachiaria mulato, Rhodes grass, Napier grass and Chloris gayana.

Setting up paddocks is also important.

The animals must be fed at the right time usually early morning and in the evening.

Nutrition

The feed rations must be balanced in respect of nutrient content and must be matched to the type of animal fed, which is cost-effective to the farmer.

Dietary aspects bearing on the success of pen fattening include feed composition, digestibility, palatability and intake.

Energy sources include maize grain, snap corn, sorghum, wheat bran and maize bran.

Feed should be supplemented with molasses which contains salt.

Optimum performance in pens can be achieved by obtaining diets containing 13 percent crude protein.

Structure

Farmers practising zero grazing can construct a structure with space allocation depending on size and breed.

Feeding space allocation should be 30-50cm depending on whether the animals are poled or horned. Feed must be offered free choice and drinking water must be available.

A water reserve that carries two to three days' supply must be installed in case of pump or borehole failure.

Diseases

Diseases such as rumenstasis, acidosis, laminitis and urinary calculi can be a problem in feeding points.

Prevention is always better and this can be done by spraying recommended acaricides.

The services of a veterinarian scientist to advise on disease prevention and the treatment of sick animals must be sought by farmers.

Good quality beef

Dr Joachim Idibu, an assistant lecturer at Makerere University's Department of Agricultural Production Department, attributes low meat consumption to inadequate production of beef.

The meat quality, he observed, is poor in terms of tenderness, softness and marbling quality.

One way of increasing beef production is to ensure that animals grow faster within two years through improvement of animal breeds and adoption of best feeding practices

It is important to follow hygiene practices in slaughter houses and ensure the beef is washed well before distributing to butcher points.

Growing demand

According to Dr Mugerwa, there is need to produce 46,800 feeder animals for prime beef to meet the growing demand created by population, urbanisation and economic growth.

This will require slaughtering 900 prime quality cattle a week or 180 animals a day.

The export market, he emphasised, needs good quality tinned canned beef and vacuum-packed special cuts with an initial size of 100 ton of beef a week and 500 well-finished cattle slaughtered a week.