AGRICULTURE with a business perspective is what the late Dr Hastings Kamuzu Banda had in mind when 50 years ago an agricultural training centre was opened on 27 July, 1960 at Bolo, Rumphi. This was part of the Tobacco Development Scheme financed by the Federal Republic of Germany.

Bolo, located at an estimated 15 Kilometres north-west of Rumphi, was the only site of a 13th basket of the chiefship. He acknowledged that there are problems now because of the increased human footprint as a result of population boom. According to Chief Chirumayumbu, more people now mean more land is reserved as cattle are the main source of livelihood. In essence, it means land for grazing cannot be accessed and hence the animals at a huge disadvantage. Not surprising, that those with cattle have access to the climate change as it takes its toll on the domestic animals. Animals have to travel long distances to access water – a development negatively affecting the related products such as milk, meat and calves.

Tapp in livestock value chain research

Professor Leonard Kamwanza, Director, Tobacco and Cotton Promotion Programmes (Topp), a local non-governmental organisation with a focus on rural development, crop and animal husbandry, explains how his organisation is changing the landscape and shared insights about the genesis of their own innovative thinking. According to Kamwanza, the Royal Norwegian Embassy, in the wake of emerging challenges brought by climate change, supported Lilongwe University of Agriculture and Natural Resources (Luazaru) on knowledge enhancement research as part of cushioning some of the challenges. The higher institution of learning then called for proposals on initiatives that were geared towards addressing climate change as part of a broader national component. Tapp was one of the organisations that were funded under the Capacity Building fund, Managing Climate Change in Malawi (CAWCC).

"We are trying to find out how long our projects have changed in terms of livestock productivity over the years due to climate change and also the utilisation of indigenous knowledge by local communities," Kamwanza gives insights in an exclusive interview after a crew of Norwegian students from Universitetet of Life Sciences (NMBU) went to the project site to collect samples for laboratory analysis on Malawi Zebu at the Central Veterinary Laboratory in Lilongwe. He explained that Tapp, other than working alone, recognises the need for synergies with other stakeholders on the livestock value chain, food security and environmental quality sustainability; transforming rural livelihoods through community-based resilience indigenous livestock management practices. This initiative tackles community resilience with consideration of the significance of indigenous livestock knowledge as a tool for adaptation to climate change.

We have several partners that are working with us. These include NMBU in Norway with Professor Olav Reksen and School of Veterinary there. Locally, we are working with Lindy, Department of Agricultural Research Services and the Department of Animal Science which assist us on this particular project. We also have another strategic partner, Central Veterinary Laboratory, who will be analysing some of the samples collected from Zebu cattle to find out what pathological infestations the animals posses," Kamwanza said.

Scope of the livestock value chain

Reksen, Professor at the Department of Production Animal Clinical Sciences at NMBU, said the two tertiary education institutions are working on the optimisation of health and production in cows, and the underlying mechanisms are quite similar in both countries. Besides the objectives of the project related to improving milk yield, calves growth, reproductive function and milk composition, Norwegian students have participated in obtaining blood samples to determine the disease situation in Malawi Zebu population in the area.

Reksen said the general idea of the current activities is to empower farmers with knowledge that the dry period has less impact on the Zebu cattle. After all, a significant part of meat and milk production is dependent on the rainy season which is not always enough to ensure adequate milk production. Therefore, any strategy that can help farmers cope with the dry period is welcome.

We have purchased dried leaves from leguminous trees and are training farmers to use them as a feed additive. We are providing the farmers with the necessary knowledge and skills to ensure they get good results. The project aims to help farmers diversify their feed sources to improve milk production and reduce the impact of climate change on livestock productivity," Reksen said.

Researchers are working on the development of climate-resistant crops and livestock, as well as the development of new technologies to help farmers adapt to climate change. They are also working on the development of new agricultural practices that are better suited to the changing climate.

"This way, we will be able to ensure that farmers have access to the best approach to Zebu cattle, and we are working with local communities to ensure that the knowledge exchange goes both ways." Reksen said during a recent visit to Malawi. "Currently, farmers do not have access to the latest technologies and knowledge, but they are being distributed by the project," said Reksen, adding, "We have purchased dried leaves from leguminous trees and are training farmers to use them as a feed additive. We are providing the farmers with the necessary knowledge and skills to ensure they get good results."
KAMWANJA — We have several partners that are working with us

**building farmers**

Mphatso Chipondula, Tapp Field Officer at Bolero, said results based on fascal and stool samples taken for diagnostics to the Central Veterinary Laboratory confirm that at least every Zebu cow is rarely de-wormed by farmers. Such treatment even passes more than two years without being administered. This has a bearing on productivity leading to low income and hence food insecurity. The cumulative years without administering drugs means more chemicals which farmers cannot afford in the long term.

Another observation is that during periods of food scarcity cattle simply go grazing anywhere without any restrictions. This makes the animals prone to diseases compared to those fed in confinement. The situation further leads to land degradation that might affect crop production and also transmission of diseases can have an impact on human beings.

"To address the prevalence of worms, the drug_lenoxic injection BP which treats gastro-intestinal..."