

Training the next generation of farmers: How UP's Faculty of Veterinary Science is helping small-scale farmers and boosting food security

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South Africa has a dual agricultural economy, with an established commercial farming industry and an emerging small-scale farmer sector. Most small-scale farmers are based on communal lands under tribal authority, or the former homeland areas. As owners of a significant number of livestock including cattle, sheep and goats, they play an important role in contributing to food security, employment, and poverty alleviation.

However, lack of knowledge on best farming practices is often a hindrance to successful and profitable livestock production in the small-scale farming community, with herd diseases and animal mortalities often leading to losses and posing a serious risk to rural livelihoods.



Farmers are being trained on aspects such as methods for early identification of diseases, optimisation of communal production systems, and prevention of diseases.

The Faculty of Veterinary Science at the University of Pretoria (UP) has a long history of providing support to farmers close to its Onderstepoort campus. About 30 years ago, a mobile outreach clinic was set up as an extension of the Onderstepoort Veterinary Academic Hospital to offer basic clinical services to resource-poor individuals in the Hammanskraal and Ratjiejane areas. This was followed by the establishment of the Afrivet Chair in Primary Animal Health Care (PAHC) in 2011, which provides support and training to livestock farmers within an approximately 80km radius of Onderstepoort. Students in their clinical years of study are taught the methodology of PAHC and strategies to formulate and apply an extension strategy for a given community. They then engage in knowledge transfer to farmers during scheduled, supervised visits, with farmers being trained on aspects such as methods for early identification of diseases, record-keeping, optimisation of communal production systems, and prevention of diseases.

PAHC training provides communities with knowledge and skills related to good production and health-management practices related to livestock. The skills imparted are practical interventions that can be undertaken by a farmer on an ongoing, daily basis. Positive feedback has been received from both the communities and the veterinary students – while the community gains knowledge on how to look after their livestock better and improve the productivity of their animals, students are exposed to the unique socio-cultural dynamics, challenges, and opportunities of rural production systems. They learn how to develop material and deliver training to their audience, taking into consideration language and literacy level, and this serves as good preparation for their post-graduation community service year in rural state veterinary areas.

UP has developed and maintained relationships with different stakeholders to access communal farmers, with local livestock associations and/or tribal authorities serving as important contact points for continued engagement with farmers. Most community members are faced with challenges related to poor education, poverty and unemployment, and there is limited access to veterinary services. The local extension officials and animal health technicians act as a support structure beyond the PAHC training.

While there have been many notable interventions over the years, one example that comes to mind relates to the training of farmers in the Motle district in 2019. There, with the assistance of the Faculty of Veterinary Science Senior Lecturer Dr Kate May, local farmers examined a total of 341 cattle by means of transrectal palpation and ultrasound to determine the pregnancy status of the community cattle and the breeding soundness of the bulls. Ultimately, they ascertained that only two of the five bulls were breeding-sound; hence their lower conception and calving percentages. As a result the farmers were able to make necessary changes.

There is also the annual Feedlot Challenge, which sees fifth-year veterinary students engage with the community with regard to the operations and dynamics of modern feedlot systems. As part of the training, farmers participate in various stages of the challenge, for instance witnessing the “on-hoof evaluation and judging” phase and having an opportunity to learn about proper selection of good animals for feedlots. The outreach includes a Farmer Engagement Day held at the Faculty, where farmers are given a lecture on current trends and good practices, and are able to walk among the feeding kraals together with students. Students later visit the individual farmers to assess their current feedlot operations, providing them with a report detailing recommendations on certain areas for improvement.

Through the PAHC training process, we have learned that there are several necessary factors for a positive, successful interaction between students and community members. Firstly, there needs to be a willingness among farmers to participate and sacrifice their time to attend sessions. Continuous communication and feedback are also important, with assessments before, during and after training, and follow-up sessions for more than six sessions. Farmers need to have material translated into their local language and need to be exposed to appropriate tools. We have found it helpful to identify one or two farmers during training who can then go on to share their knowledge in farmer-to-farmer training.

Naturally, the programme is not without its challenges, and time constraints make it challenging to revisit all the villages and individual farmers, along with securing the funds to print relevant training

material and purchase basic tools for demonstration. It can also be a challenge to find or create a local supplier willing to provide relevant medication and tools.

It is, however, a great privilege to be able to assist in nurturing healthy animals which are productive and can contribute to improving the livelihoods of rural communities. We have already extended our training to other provinces such as Mpumalanga, KwaZulu-Natal and the Eastern Cape and, depending on available funding, intend on spreading it throughout the country.

Dr Rebone Moerane, HOD: Production Animal Studies, Faculty of Veterinary Science, University of Pretoria, and Dr Alfred Kgasi, Senior Lecturer in the Department of Production Animal Studies and Head of the Afrivet Chair in Primary Animal Health Care (PAHC) at the Faculty of Veterinary Science.

Published by Jimmy Masombuka