

## ARC News– Working towards your success

### LEAP-AGRI OPTIBOV TRAINING OF SMALL-HOLDER FARMERS, WOMEN AND YOUTH

The ARC-Animal Production is collaborating with 5 international institutions from the Northern to the Southern hemisphere in the Genetic characterization of cattle populations for optimized performance in African ecosystems (OPTIBOV) project funded by the LEAP-Agri, which is a joint Europe Africa Research and Innovation initiative related to Food and Nutrition Security and Sustainable Agriculture. Participating countries are South Africa, Uganda and Egypt from Africa and the Netherlands, Portugal and Finland from Europe.

The OPTIBOV project aims to improve the production and survival of the indigenous cattle from Africa and Europe for food security with changing environments. This will be achieved by examining the genomes of cattle across geographic zones, their gut microbial populations, and other phenotypes of interest to contribute key information towards improving the performance of locally adapted indigenous breeds while maintaining their biodiversity.

ARC-AP is leading OPTIBOV's Work Package 6: Training and Dissemination of knowledge generated to stakeholders i.e., smallholder farmers, cattle breed associations and especially women and the youth. In November 2019, LEAP-Agri OPTIBOV partners visited South Africa to conduct training mainly to launch and make awareness of the project, emphasise the importance of farmer's active participation, practical demonstration of project protocols and use of the mobile App for the exchange of project data and information. In addition, to train farmers about the importance of indigenous/local genetic resources and impact of climate change on livestock production.



ARC-AP Researchers and the LEAP-Agri OPTIBOV consortium members during their visit in South Africa



The geographic representation of the OPTIBOV project partners in Africa and Europe

Five trainings were conducted: 5 November 2019 in Gauteng, 9 November 2019 in Limpopo and 20 November 2019 in Eastern Cape. During the first dates mentioned a total of 250 people were trained, including 78 Smallholder, Emerging and Communal farmers (35 males and 43 females). On 7 November 2019 thirty five post-graduate students from the University of Limpopo, the University of Pretoria and the Tshwane University of Technology were trained. Youth at High School level (Grade 12) from Thembisa High School trained on 6 November 2019 in Gauteng and Hututu High School in Limpopo on 9 November 2019. In total 137 learners received training.

In the current year, the LEAP-Agri OPTIBOV team conducted three trainings in the North West and Limpopo provinces. These included 55 youth from South West Gauteng TVET College in Krugersdorp from 25 - 26 August 2020, 32 smallholder farmers from Mookgopong on 30 September 2020 and 15 Mkopane smallholder farmers on 1 October 2020 in Limpopo province. OPTIBOV trainings has forged a strong collaboration with the Beef Recording Scheme and KyD towards marketing recording services through presentations and demonstrations. In the next training phase, the OPTIBOV project will be delivering science solutions in the most appropriate manner to different stakeholders, decision-makers, scientists and the public.



Training presented in Ga-Makgatle, Limpopo



Training presented at Thembisa High School, Gauteng



ARC-AP OPTIBOV team during farmers training in Mkopane, Limpopo



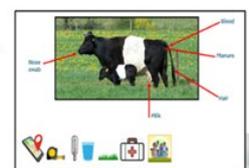
Youth training in South West Gauteng TVET College in Krugersdorp, North West



Bull selection demonstration during farmers training in Mookgopong, Limpopo



- Diversity
- Genomic variation and breed characteristics
- Selective sweeps
- Collecting phenotypes
- Phenotype-genotype interaction
- Phenotype-genotype-ecotype interaction



The indigenous cattle breeds from Africa and Europe on the OPTIBOV project