

Session 1: Drivers and Challenges for new uptakes of new sources and uses of data recording

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LIVESTOCK RECORDING AND IMPROVEMENT IN SOUTH AFRICA: CHALLENGES AND MAJOR DRIVERS

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Abstract

The livestock industry, as part of the bigger agricultural industries, in South Africa, still reflect the previous history of the political dispensation of the recent past. Commercial private sector farmers, involved with animal recording and breeding, like in other modern open societies, focus on using the available resources to ensure sustainable profitability in their own herds and flocks, but also for buyers of breeding animals. Government assistance is mainly focussed on investment in research and development and assistance for farmers representing the previously disadvantaged group. South African livestock recording, and related activities are governed by legislation whereby Breeders' Societies have powers to determine breed standards. All seedstock ("stud") animals also must be recorded by a Registering Authority (RA). The recording standards, system and services of a RA must comply with international standards or guidelines. SA Stud Book (SASB) is an association of Breeders' Societies and is also the RA for more than 80 species and breed combinations. All SASB's funding are from direct services to participating farmers.

Major challenges are:

- Data quality assurance and timely recordings, especially for owner sampling & recording.
- Acceptance and timely uptake of newly developed scientific and technology products and services.
- Mutual understanding and insight into the correct use of genetic and management information emanating from recordings.
- Proportional allocation of funding for relevant research and development.
- Continuous investment in training & education of technical advisors and farmers.

Major drivers are:

- Sustainable profit and utilisation of natural and other resources.
- Expanding the knowledge level and abilities of commercial herds and flocks to utilise genetic gains of seedstock animals.
- Optimal use of technologies for easier reliable recording and application in herds and flocks.
- Timely adjustments and application driven by new scientific and industry knowledge.

Scientific and other developments since 2012 have focused on:

- Model development and implementation to increase genetic merit production accuracy, including expansion in the use of genomic information in single step methodologies.
- Interactive data and information exchange between farms, laboratories and SASB's Logix database & web interface.
- Increased use of recording data for management information, including benchmarking for dairy, beef and small stock participants.
- Continuous timely adaptations and application of selection indices based on additive (co) variances, regional environmental constraints and price structures.
- Developing and adaptation of web-based tools for users to set up own optimal breeding objectives, selection (at herd and breed levels) and mating plans.

*Keywords: van der Westhuizen, livestock recording, genetic improvement, sustainable production.
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