LIVESTOCK WELFARE COORDINATING COMMITTEE

Established 1978

Livestock Welfare Coordinating Committee
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BREEDING CLIMATE-TOLERANT LIVESTOCK IN SOUTH AFRICA

A consortium of knowledgeable, experienced expertise will be best able to evaluate current knowledge and identify significant gaps in research that need to be investigated. This consortium should include the representatives of at least SA Studbook, Animal Science Departments, Genetics Departments and Research Organisations like Irene that may be actively involved in research in this field.

Whichever organization submits a tender to undertake a literature search on the subject should be required to produce a report that covers at least all the aspects listed in the accompanying document.

Yours sincerely,

Prof Gareth Bath
CHAIR: LWCC

cc: Mr Gerhard Schutte (Vice chair LWCC)

LITERATURE SEARCH: BREEDING CLIMATE-ADAPTED LIVESTOCK

The literature search should involve available applicable research in scientifically accredited journals, but also pertinent books and "grey" literature on the subject. The search must reveal and evaluate findings on at least the following aspects, to assist with the creation of information to guide practical farmers and their advisors to breed climate-resilient cattle, sheep and goats.

- The heritability of favourable traits that lead to climate resilience.
- The nature of the heritable mechanisms involved in making livestock more climate-adapted (metabolic, behavioural, anatomical, etc)
- Practical criteria for selection and culling.
- Measurement criteria for evaluation of genetic progress in achieving better climate adaptability.
- Confirmation or otherwise that heat tolerance and cold tolerance are mutually exclusive.
- Examples of successful climate-resilient breeding systems, if there are any.
- Variations in climate resilience between breeds of livestock.
- Data on the economic value of breeding resilient livestock.
- Pertinent factors that can facilitate the adoption of breeding climate-resilient livestock.