



Co-ordination, support and promotion of needs-driven research & development in the South African dairy industry.

(PRJ-0271-2020)

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Quarter 1 2020 (January 2020 till March 2020)

Project goals

Goal 1 - To promote R & D, limit research fragmentation and initiate cooperation between R&D capacities towards achieving the strategic direction of the industry.

Achievements

We continued with our quest to seek co-operation and outside funding. To that effect we had two Meetings with the Technology Innovation Agency (TIA) to follow up on the next phase in the Genomics Programme. As mentioned in the third quarter report of 2019, the TIA indicated that they would be interested in supporting a more comprehensive programme which could ensure sustainability and profitability of the Dairy Industry. The resulting proposal which was presented to them on 9 September 2019 was titled: SUSTAINABILITY/STEWARDSHIP OF THE SOUTH AFRICAN DAIRY INDUSTRY. The next step was to develop the application according to the specifications of the TIA. This has been done, the title being: MILK SA APPLICATION TO TIA FOR FUNDING OF PROJECT: FEB 2020. This was presented to the TIA on the 2nd of March 2020, a document of well over 30 pages which was compiled by the author. At that Meeting TIA officials indicated that they will consider projects with a tangible outcome in the form of a product, process or guidelines. The author then proceeded to compile a document to that effect, which is attached as a Annexure. TIA officials then indicated that due to budget constraints in the Dept of Science and Technology because of the outbreak of the Covid - 19 virus, they will not be able to fund the programme this year but hope to consider it next year (2021).

In terms of co-operation with other R & D capacities, a contract was signed with SA STUDBOOK to do analyses on software programmes of automatic milking systems to enable more information to be retrieved and especially to facilitate time trends, and in association with Dr Muller of the US, to develop efficiency parameters which can be incorporated. It is expected that this initiative will culminate into a dashboard and APP development to the benefit of farmers.

No Non-achievements / underperformance has been reported

Goal 2 - To guide the R&D program by means of effective structural arrangements, administration and fund sourcing.

Achievements

The budget of the TIA application discussed under Goal 1 is R15.3 million for 2020 with 10% escalations for both 2021 and 2022. Normally the policy of the TIA is to share the cost in a 50 -50

ratio with the application institution, which implies that if the application is successful, the TIA may contribute in excess of R7 million to our R & D budget. As mentioned under Goal 1 the decision to co-fund by the TIA was postponed until 2021 due to budget restrictions caused by activities related to managing Covid - 19.

A MANCOM Meeting was held on 21 February. The resolutions of previous meetings are incorporated in the Agenda of the Meeting which was discussed and decisions taken on. The Agenda is attached as an Annexure.

No Non-achievements / underperformance has been reported

Goal 3 - To accumulate and publish existing domestic and international scientific knowledge of applicable and practical value to enhance the industry

Achievements

THE RESEARCH COLUMN: The target of scientific articles sourced from the international literature to be entered on the website is two per month, that is six for the quarter. The target was met. Some of the articles were also published in The Dairy Mail under the regular research column of the author. The topics covered as reflected in the titles of the papers are:

- 1) *Evaluation of candidate gene effects and environmental factors on reproductive performance of Holstein cows*
- 2) *Effect of zinc sources on milk yield, milk composition and plasma concentration of metabolites in dairy cows*
- 3) *Meta-analysis of the effects of supplemental rumen-protected choline during the transition period on performance and health of parous dairy cows.*
- 4) *Responses to rumen-protected choline in transition cows do not depend on prepartum body condition.*
- 5) *Enzyme-based strategy to eradicate monospecies *Macrococcus caseolyticus* biofilm contamination in dairy industries*
- 6) *Diagnosing the pregnancy status of dairy cows: How useful is milk mid-infrared spectroscopy?*

DAIRY R & D IN SA: The target of South African scientific articles sourced to be entered on the website is also two per month, i.e. six per quarter. The target was met. The following themes were covered:

- a) HERD PRODUCTION MODELS FOR SMALLHOLDER DAIRY PRODUCTION.
- b) FEED ADDITIVES CAN INFLUENCE RUMEN BACTERIAL PROTEIN COMPOSITION
- c) GENETIC PARAMETERS FOR FEMALE FERTILITY TRAITS
- d) INBREEDING IN SA DAIRY BREEDS AS MEASURED BY GENOMIC PARAMETERS.
- e) BEHAVIOUR OF NGUNI X HOLSTEIN CROSSBRED COWS ON VELD
- f) EVALUATION OF CLAW HEALTH IN DIRT LOT VS FREE STALL HOUSING.

No Non-achievements / underperformance has been reported

Goal 4 - To advise and assist with national and international managerial, strategic and position publications on any matters which may support the strategic direction of the industry. Advice may also imply representing the industry on government and non-government bodies

Achievements

1) The author and Dr Colin Ohlhoff are compiling a document intended to provide a record of and guidance to the Dairy Industry with respect to sustainability. The provisional title is: **Approach and progress to ensure sustainability in the SA dairy Industry**. It contains sections on greenhouse gas mitigation, soil health, responsible water use, waste management, biodiversity, market development, rural economies, working conditions, product quality and safety, and animal care.

2) The application document to the TIA mentioned under Goal 1 is a comprehensive document providing an overview and insight into all aspects of the Dairy Industry. Amongst others, it contains sections on: Strategic context: Commercial Outputs and Economic Value; Current status of the Dairy Industry: Achievements; Strategic Partnerships; Dairy sustainability: vision; mission; strategic objectives; impact analyses; Situation analysis: International landscape; South African landscape; opportunities and challenges; Implementation, Risk analysis; Route to market etc.

3) Input and suggestions were made into the International document: **Transforming Global Agriculture in Feeding the World and Protecting the Planet**, compiled by Dr Peer Ederer for the FAO.

4) The article originally written by the author in July 2019, titled: **Are all the arguments against livestock justifiable?**, was updated and distributed because of general interest in the industry.

No Non-achievements / underperformance has been reported

Goal 5 - To support the dairy sector with R & D and advice on matters affecting sustainability. These include: Environmental – greenhouse gas reduction, carbon sequestration & storage, water and pasture fertilization efficiencies, waste and effluent reduction and treatment, and ecosystem and biodiversity protection; Animal welfare – the internationally acknowledged five freedoms (freedom from: a. thirst, hunger & malnutrition; b. discomfort; c. pain, injury & disease; d. to express normal behaviour, and e. fear & distress) are the point of departure.

Achievements

Items 1) and 2) discussed under Goal 4 apply here as well.

No Non-achievements / underperformance has been reported

Income and expenditure statement

Income and expenditure statement	MSA Meissner PRJ-0242_Q1 Report 2020 Expenditure.docx
Unnecessary spending during period	No

Popular Report

[MSA Meissner PRJ-0242_Q1 Report 2020_Popular Report.docx](#)

Additional documentation

[Approach and progress to ensure sustainability in the SA dairy Industry - CO.docx](#)
[20200221 mancom agenda.docx](#)

Statement

Levy funds were applied only for the purposes stated in the contract	Yes
Levy funds were applied in an appropriate and accountable manner	Yes
Sufficient management and internal control systems were in place to adequately control the project and accurately account for the project expenditure	Yes
The information provided in the report is correct	Yes