



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

(PRJ-0271-2020)

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Quarter 3 2020 (July 2020 till September 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

A presentation was made to the TIA for possible funding and they were interested to fund those projects with a tangible outcome. Following further discussions, they were willing to consider a R5 million contribution to the Milk SA R & D Program if Milk SA also allocates the same amount. The TIA officials were optimistic that the proposal will be supported; however, the Covid-19 pandemic resulted in funds being relocated to health services. It is not sure whether the application will be reconsidered next year.

In terms of co-operation with other R & D capacities, an agreement was signed with SA STUD BOOK to do analyses on software programs 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. This initiative could culminate into a dashboard and APP development. However, the expected projects have been cancelled since some DRDC members had reservations. As a result a new approach will have to be formulated.

A further co-operation project is a new proposal involving Asset Research, the University of Stellenbosch, WCDA and Trace & Save. The proposed project will look at modelling to integrate farm production and economic data with environmental sustainable parameters.

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 allocated budget to the Milk SA Program for 2020 is R3.65 million, but with funds carried over from 2019 and savings, the R & D Program should have sufficient funds to meet obligations.

A MANCOM Meeting was held on 7 August. The resolutions of the meeting were incorporated in the Agenda of the DRDC Meeting of 20 August. Of relevance from the DRDC Meeting is the preliminary evaluation of some 19 project proposals for 2021, of which 9 were advanced to the

second round of evaluation which will be done by the DRF according to a set of criteria. The policy and procedures for funding were also reviewed.

The document written by the author and Dr Colin Ohlhoff with the title: 'Approach and Progress to Ensure Sustainability in the SA Dairy Industry', was approved and supported by the Milk SA Board. It will be put on the website and pieces published.

Priorities for further research in the Milk Flocculation program were followed up and one of the new project proposals will address the relationship of the Ca – P ratio in the cow's diet with milk instability. This will be done at the Outeniqua Research Station of the WCDA.

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:

* *Phenotypic modelling of residual feed intake using physical activity and methane production as energy sinks.*

* *Why methane from cattle warms the climate differently than CO₂ from fossil fuels.*

* *Physical and economic comparison of pasture-based automatic and conventional milking systems.*

* *Effect of bismuth subnitrate on in vitro growth of major mastitis pathogens.*

* *Associating mobility scores with production and reproductive performance in pasture-based dairy cows.*

* *3-Nitrooxypropanol decreases methane emissions and increases hydrogen emissions of early lactation dairy cows, with associated changes in nutrient digestibility and energy metabolism.*

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) IS NITROUS OXIDE NOW THE MAJOR GHG CONCERN IN AGRICULTURE?

b) STILLBIRTHS IN SA HOLSTEINS.

c) SUSTAINABILITY IN THE SA DAIRY INDUSTRY: A REPORT ON THE STATUS AND PROGRESS – AUGUST 2020.

d) HETEROGENIC VARIANCE BETWEEN HIGH AND LOW INPUT DAIRY SYSTEMS.

e) MAIZE HARDNESS AS A QUALITY CRITERIUM IN DAIRY COW DIETS.

f) PROGRESS ON R & D AND OTHER DEVELOPMENTS IN SUSTAINABILITY ISSUES.

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

As discussed under Goal 2, the author and Dr Colin Ohlhoff have compiled a document intended to provide a record of and guidance to the Dairy Industry with respect to sustainability. The title is: **Sustainability in the SA dairy Industry: A Status and Progress Report**. 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. The contents of the document are flexible and will be altered regularly as new information becomes available. The document has been approved by the Milk SA Board in its final format and is available in Pdf from the Milk SA website.

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

The document mentioned under Goals 2 and 4 applies here as well.

No Non-achievements / underperformance has been reported

Income and expenditure statement

Income and expenditure statement	MSA Meissner_PRJ-0271_Q3 Report_2020_Expenditure.docx
Unnecessary spending during period	No

Popular Report

[MSA Meissner_PRJ-0271_Q3 Report_2020_Popular Report.docx](#)

Additional documentation

No file has been uploaded

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

