



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

(PRJ-0340-2023)

***Dr Heinz H. Meissner***

***Quarter 1 2023/2023*** (January 2023 till March 2023)

**Project goals**

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

***Achievements***

The policy on Intellectual Property (IP) with respect to R & D contracts has been reviewed by a knowledgeable legal firm. They have come up with meaningful suggestions which have been considered by the Project Manager, the CEO and the Operational Officer of Milk SA. Some questions remain which will be dealt with soon. In view of important negotiations with the FABI, UP, TIA as a possible co-funder, and maybe international institutions which could partake in the envisaged R & D projects on Brucellosis (UP) and Sporidesmin Fungus Identification (FABI), the IP policy should be solid. The contract with FABI is being developed and should be signed soon, but the Brucellosis project is being delayed due to budgetary constraints and withdrawal by the Red Meat Industry, which initially committed support.

The Project Manager initiated discussions with the TIA and did a submission to them (attached) for possible co-funding of the Brucellosis and other projects. They expressed a need for a long term relationship with the Dairy Industry through Milk SA and is in the process of developing a MoA to that effect.

With regard to the Sporidesmin liver disease (Facial eczema) problem, the company Alltech expressed a wish to get involved. Initial discussions have been held and will be continued, although there is scepticism if the methodology to be implemented is robust enough to provide the answers sought.

An update was provided to the Board on the progress of projects in the biannual report which also provides insight into the institutions and capacities the R & D Project engage to ensure reliable results and outputs, in line with Milk SA goals and objectives. The updated document titled: MILK SA RESEARCH AND DEVELOPMENT PROJECTS: STATUS JANUARY 2023, was attached to the 2022 Annual Report of the Project Manager.

***No Non-achievements / underperformance has been reported***

**Goal 2 - To guide the R&D program by means of effective structural and R & D Committee arrangements, initiating and promoting research initiatives,**

## research project construction and evaluation, and fund sourcing.

### **Achievements**

The first MANCOM Meeting of 2023 was held on 23 February and the first DRDC Meeting on 9 March. Prominent decisions or outcomes include: (1) It was noted that the "Breeding fit for purpose" article, in which the Project Manager was co-author, was published in two parts in The Dairy Mail. (2) Animal Health and Welfare under Dr Mark Chimes and Environment under Dr Colin Ohlhoff are now registered on the system as separate sub-projects. (3) The model developed to calculate on-farm GHG emissions and carbon sequestration, can be developed further to include water use and GAPs, including animal welfare. (4) The DRDC Terms of Reference has been concluded, whereas the R & D website development is in progress. (5) Effective and coordinated communication of scientific information from the R & D Programme, the SASDT, DSA and the CEP has been referred to the Milk SA Coordinating Committee. (6) The extension document on Contagious Abortion, developed by Dr Chimes was approved. (7) Concern was expressed that the National Biosecurity HUB (2022) document on "Biosecurity in South Africa, a renewed focus", show absence of serious animal health issues. Therefore, Mr Fanie Ferreira, as NAHF representative, was requested to put this on the table at the next NAHF Meeting.

Fund sourcing: An application has been submitted to the TIA; see Attachment.

## **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 and DAIRY R & D IN SA: The target of respectively scientific articles sourced from the international literature and SA scientific articles to be entered on the website is two per month, i.e. six for the quarter. The target was met. Some of the articles are published in the Dairy Mail under the regular Research Column of the author.

Titles of the Research Column were:

1. Responsible antibiotic use labelling and consumers' willingness to buy and pay for fluid milk.
2. Economic analysis of biosecurity adoption in dairy farming: evidence from Ireland.
3. Effects of rumen-native microbial feed supplementation on milk yield, composition, and feed efficiency in lactating dairy cows.
4. Nutritive value, silage fermentation characteristics, and aerobic stability of grass-legume round-baled silages at differing moisture concentrations with and without manure fertilization and microbial inoculation.
5. Changes in genetic trends in US dairy cattle since the implementation of genomic selection.
6. Effects of corn silage supplementation strategy and grazing intensity on herbage intake, milk production, and behavior of dairy cows.

Topics covered in Dairy R & D in SA were:

- (a) ANIMAL WELFARE – MORE THAN SENTIENCE?
- (b) ARE WE SERIOUS AND KNOWLEDGEABLE ENOUGH TO EFFECTIVELY LIMIT ANTIBIOTIC RESISTANCE?
- (c) PROBIOTIC YOGHURT WITH POTENTIAL ANTI-CANDIDAL AND ANTI-BACTERIAL ACTIVITY – THE 2022 PROJECT PROGRESS REPORT.
- (d) BUFFER ZONES ON DAIRY FARMS.
- (e) AUTOMATED MEASUREMENTS OF BCS AND LAMENESS.
- (f) ESTIMATES OF GREENHOUSE GAS EMISSIONS ON PASTURE-BASED DAIRY FARMS.

In addition, an article was also written for the Livestock Health and Production Review magazine, entitled: **Climate change and cattle methane emission, a conundrum or**

**not?** See attachment.

### ***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.**

#### ***Achievements***

A workshop was staged at UP together with NZs Agriculture Greenhouse Gas Research Centre, on 22 and 23 March 2023 to enhance partnerships in the southern African region for the reduction of greenhouse gas emissions. As part of a situational analysis report on the state of play of agricultural GHG coordination and research in southern Africa, the Project Manager was requested to talk on "The role of NGOs in GHG Research" (presentation attached). The Meeting was valuable as it indicated the capacity in the country on this subject.

The paper mentioned under Goal 3 on **Climate change and cattle methane emission, a conundrum or not?** also benefits what is envisaged under Goal 4, as does the document: "The global impact of cattle: A socio-economic, food security and environmental perspective", discussed in the Quarter 4 Report of 2022.

### ***No Non-achievements / underperformance has been reported***

**Goal 5 - To support the dairy industry with R & D and advice on matters affecting sustainability, such as environmental – GHG reduction, carbon sequestration, water use efficiency, waste treatment, ecosystem and biodiversity protection – and animal welfare. To that effect, also oversee the Animal Health and Welfare and Environment sub-projects**

#### ***Achievements***

The PP presentation and paper mentioned under Goal 4 also provide information on international and local approaches to sustainability, which could be relevant as advisory material. Important also is that projects of the Milk SA R & D Programme in the biannual report which investigate GHG reduction and sequestration, pasture N fertilization efficiency, waste and effluent treatment, ecosystem protection and animal welfare, are specifically listed. Furthermore, evidence is provided to indicate that livestock is actually positive to the global environment if well-managed, and not negative as many media communications would lead us to believe.

### ***No Non-achievements / underperformance has been reported***

## **Income and expenditure statement**

Income and expenditure statement	<a href="#">MSA Meissner PRJ-0340 Q1 Report 2023 Expenditure.docx</a>
Unnecessary spending during period	No

## **Popular Report**

## Additional documentation

[MSA TIA Funding Application\\_March 2023.docx](#)

[Climate change and cattle methane emission.docx](#)

[THE ROLE OF NGOS IN GHG RESEARCH Final.pptx](#)

## 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