



# **RESISTANCE TO AVAILABLE ANTIBIOTICS IN LACTATING COWS WITH MASTITIS**

(PRJ-0110-2016)

**University of Pretoria (ML van der Leek, Principal Investigator)**

**Quarter 2 2016** (April 2016 till June 2016)

## **Project goals**

**Goal 1 - Mastitis survey among SA milk producers; herd visits for verification of survey data; collection of additional data; analysis of the survey data; and writing up the SCC study: January to June 2016**

### **Achievements**

The survey was released on 21/04/2016 with an initial closing date of 13/05/2016 at 17:00, giving producers 3 weeks to complete the survey. Invites were by email (~1,300) or mail (~400). During this period a reminder letters and text message were sent to each producer. Responses were monitored throughout the 3 weeks and on 12/05/2016 it was decided to extend the survey for another 2 weeks, at which time we had only received around 70 responses. The new closing date was set for 27/05/2016 at 17:00 at which time we had 221 responses. Unfortunately not all of these responses were valid and some had to be deleted:

**38** responses contained no data.

**26 of the 38** were double/triple responses. These respondents either lost the link to continue their survey after the save and exit option was selected or forgot/did not know how to go back and continue. We kept each respondent's most updated version and most had completed the survey on their subsequent attempt/s.

Based on the survey program's (Surveygizmo) internal auditing, we quarantined/deleted 5 surveys.

Two surveys from goat dairies were deleted.

One apparent fictitious/nuisance response (Piet Pompies) was also deleted.

We therefore have 149 valid responses to analyze and use for the selection of farm visits. This data is in the process of being cleaned for analysis.

Below is a summary of some of the data. Of note is that the survey responses follow industry trends:

PROVINCE	NUMBER OF FARMS	NUMBER OF COWS IN MILK				FEEDING SYSTEM			
		<200	200-1000	>1000	#	TMR	Pasture	Combination	#
Western Cape	55	52.38%	42.86%	4.76%	42/55	20.9%	48.8%	30.2%	43/55
Eastern Cape	34	7.14%	82.14%	10.72%	28/34	7.4%	66.7%	25.9%	27/34
Kwazulu-Natal	28	12.5%	66.67%	20.83%	24/28	4.4%	69.6%	26.1%	23/28
North West	13	81.82%	18.18%	0%	11/13	27.3%	0%	72.7%	11/13
Gauteng	7	66.67%	33.33%	0%	4/6	33.33%	0%	66.67%	6/7

Free State	7	100%	0%	0%	4/7	25%	25%	50%	4/7
Mpumalanga	4	33.33%	66.67%	0%	3/4	0%	100%	0%	3/4
Northern Cape	1	-	-	-	-	-	-	-	-
Limpopo	None	-	-	-	-	-	-	-	-

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

## Goal 2 - Testing of mastitic milk samples at the milk laboratory of the Faculty of Veterinary Science, Onderstepoort (ongoing)

### Achievements

We now have a total of 257 samples representing 42 farms in the EC, KZN, LP, NW, WC & one from NAM. Dr Nenene (see below) will assist in analysis.

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

## Goal 3 - Collection and collation of microbial isolation and sensitivity testing data from other laboratories (ongoing)

### Achievements

A 2nd round of communication was initiated with Allerton, Vetdiagnostix & Deltamune. Only Allerton has responded. Following a query from Dr Nenene, Veterinary Public Health, Onderstepoort to Milk SA & discussion between Dr Nenene & myself we are pursuing his leading a part of the project, viz. the compilation of AMR data from 3 laboratories (Allerton, Vetdiagnostix & Deltamune) as well as the analysis thereof.

### Non-achievements / underperformance

Have been reluctant to aggressively pursue this project until the required human resources have been identified.

## Goal 4 - Analysis of Somatic Cell Count (SCC) fluctuation data (ongoing)

### Achievements

Analysis of the dataset *in toto* had been initiated. Discrepancies were detected in the Weather SA dataset, one that had required considerable manipulation. We have reverted back to the original Weather SA database & will redo the necessary manipulations.

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

## Income and expenditure statement

Unnecessary spending during period	No
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## Popular Report

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## Additional documentation

[milk sa update 160724.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