New developments in using Milk Recording Information in South Africa

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Abstract

Due to recent developments that changed the scene of farm animal recording in South Africa a more integrated approach is followed to utilise information at farm level. One such important development is the creation of dairy management reports of use to individual dairy farmers and industry agencies. Changes also include direct access of current Logix (the web interface to the database) users to own herd management information and the setting up of own benchmarks by using other herds (of choice). Industry agencies also now have access to milk recording information on breed, district, regional and national level to compare trends in production and other properties. Reporting also provide for own report design by individual farmers or advisors with the choice of adding technical and other comments and management proposals. Although final reports are generated to pdf format, web access allow for interactive use of different types of graphs and tables to assist in management decisions.

Keywords: dairy cattle, management reports, milk recording, somatic cell, milk urea nitrogen.

Introduction

Farm animal recording in South Africa has, to a large extend, started reaching maturity due to an increasing push by industry bodies to share in the decision making processes and pace of change in implementing new and innovative ideas and technologies. Investment in infrastructure and capacity through public money has basically shifted in focus from serving commercial to developing agriculture. This is in line with policies to address gaps in income due to historical and other reasons. Although these developments should be seen against the responsibility of government to also make use of current infrastructures and technologies for this purpose (Van der Westhuizen, *et al*, 2007), the commercial sector still has to maintain its competitiveness on a global scale.

The recent developments of establishing an industry financed and owned production recording system should be seen against this background.

It is known that the reasons for recording evolved from what the FAO (1998) described as animal recording to:

1. establish baseline animal performance levels,
2. compare specific production system alternatives,
3. be utilised for individual animal (and herd) management and
4. improve the genetic merit of the next generation.

Although baseline animal performance levels and, to a very large extend, the improvement of the genetic merit of the South African livestock population could be achieved through government driven initiatives in the past the optimal use of recorded information for

management purposes were mainly neglected or were based on individual efforts of some of the industry role players.

The $Logix_{Animal\ Recording}$ system serves as the basis for the newly established industry owned system. One of the first priorities was to establish a proper way of addressing the need of participating dairy farmers to make use of recorded data for immediate management interventions in individual herds. This development is based on research into the use of similar systems elsewhere. Implementation started on 1 January 2012.

Principles of the management system and reports

Milk management reports from $Logix_{Milk}$ is a Web-based system providing for the interactive involvement of different role players and technical advisors in the well being of dairy herds and individual cows. This is achieved by allowing different levels of securities, based on each owner's preferences and level of participation.

The first level of response after matching of farm and laboratory data is by means of a mobile text message of alert as well as an email with attached comma separated value files to the owner, manager and technical advisors. The email message attachments are listing cows with high somatic cell counts and those prone for ketosis and acidosis (based on milk composition ratios). At the same time a more comprehensive series of interactive graphs, widgets and tables are available on the Logix web site allowing each of the users the opportunity to interact directly with the results or design management reports and add recommendations to herd managers. Reports can directly be accessed via the web and downloaded in portable document format (pdf).

Users are also enabled to benchmark each herd with either a pre-set of other herds or an own choice of herds, mostly based on the same production system, nutritional regime, region or within a study group.

Aspects addressed

Currently the main focus areas of the milk management reports are: Milk production tendencies and variation; milk composition and quality; herd health; nutritional needs and deficiencies; fertility levels and interventions; and genetic merit and production efficiency.

A one-glance summary of the current and previous two test day particulars assist users in deciding on a more detailed investigation into possible timely management interventions. Figure 1 is an example of this web-based report.

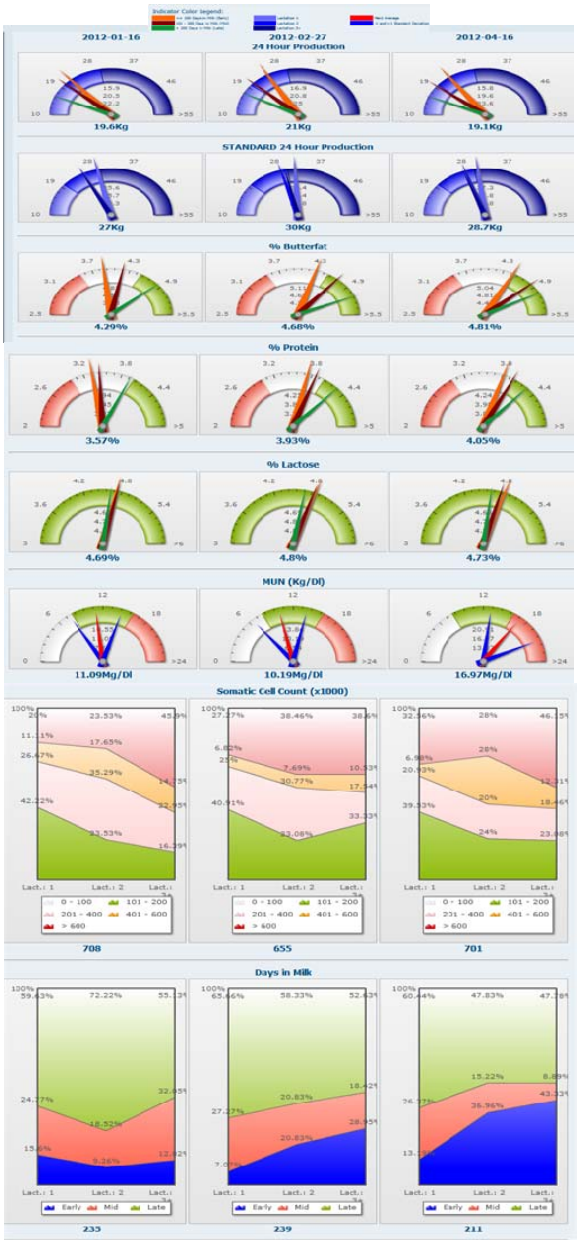

Figure 1. Example of a graphic herd summary.

Eleven detailed graphs on a specific test day of choice in the last two years, eight trend based graphs, seven cumulative graphs and own choice action lists are also available for each user and can be included in custom reports. In most cases biological norms and benchmarking assist in setting standards to measure management efficiencies in each herd.

Participation and future prospects.

Participation in milk recording in South Africa is generally low, compared to world standards. It is estimated that only about 25% -30% of all dairy cows take part (Dairy Sector Working Group, 2005). New initiatives are aimed at making use of innovative and interactive reports, technical advisors in the fields of animal nutrition and health and integration of all aspects of

recording and information to increase awareness of the value of milk recording, thereby also contributing towards more meaningful genetic evaluations as well.

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