

Utilization of milk quality data for decision and policymaking

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1) Background and problem statement:

Background:

Bureau of Quality Control of Livestock Products (BQCLP) is responsible for testing the raw milk, quality assurance control and work as the center of laboratory network (9 Regional Veterinary Research and Development Center (RVRDC) in Thailand. The results of raw milk quality analysis reveal the situation of raw milk quality produced by farmers. Outcome of analysed data of raw milk quality is used as a database to improve the quality of raw milk to meet national standards, including to determine the raw milk price.

Problem identified:

The milk boards has announced the Standards for purchasing raw cow milk since 2559 (2016). At present, the information and relevant regulations on raw milk have been changed over time, in addition to that, the cost of producing raw milk has increased. The milk boards committee deems it necessary to review this standard so as to appropriately improve raw cow milk quality and promote milk trade. In consequence of this review, the original standards for purchasing raw cow milk of 2559 are repealed and the updating standard of 2566 is issued instead.

2) Project objectives:

- To collect the analysis results of raw milk data from the central and regional laboratories within Thailand
- To evaluate milk quality data for assessing the middle milk price
- Submit the high level for decision and policy making.
- To use as the basic information on the update milk quality data in supporting the farmers to improve and develop their products.

3) Methods used:

1. Set up the laboratory network for milk quality testing according to the Thai Agricultural Standard
2. Meeting among the labs network for harmonizing of test method and sharing data information
3. Collecting quality milk data within the past 3 years, analysis all data
4. Evaluate milk quality data include mean, average and percentage compare with previous purchasing price.
5. Prepare an Official Appointment Letter to establish the working group committee.
6. Working group committee consideration comes with the results of middle milk price.
7. Consider submitting it to the milk board.
8. Announcement of Standards for purchasing raw cow milk of 2566.

3) Results:

- The data used for analysis includes somatic cell count, Milk fat content and Milk solid not fat around 200,000 data/year, total bacteria count around 2,000 data/year.
- Quality of raw milk shall be as: fat content shall not be less than 3.35% by weight, milk solid not fat content shall not be less than 8.25% by weight, somatic cell count shall not exceed 500,000 cells/ml., standard plate count shall not exceed 500,000 CFU/ml.,
- Evaluate milk quality data compared with previous standards for purchasing cow milk as follows:

parameter	Quality at middle price	Percentage of data with values above the middle price
Milk fat	3.40 – 3.58 %	~ 83%
Solid not fat	8.35 – 8.49 %	~ 46%
Somatic cell count	400,001 – 500,000 cells/ml.	~ 67%
Standard plate count	400,001 – 500,000 CFU/ml.	~ 77%

4) Conclusions and next steps:

Conclusion:

- The middle price is set at the Thai agricultural standard for raw cow milk and slightly above the standard. Except for milk solid not fat where the middle price is set higher than the standard.
- The information can be used to set price criteria consistent with the quality of milk produced by dairy farmers. There is an incentive to develop milk quality, so that most farmers can produce milk quality higher than the standard.

Next steps:

- Submission of conclusion report to the high level or milk board as a decision and policy making

5) Challenges identified and lesson learnt:

Challenges identified:

- Approval of the Official Appointment Letter and distribute to the working committee.
- Guidelines for preparing data to be more accurate and reliable.

Lesson learnt:

- Know the steps and processes for preparing standards for purchasing raw milk.
- There is a network of stakeholders in the dairy industry.