THE GLOBAL STANDARD
FOR LIVESTOCK DATA

Procedure 12 of Section 11 of ICAR Guidelines – Procedure for Test-Day Practices for Obtaining Milk Samples on Individual Animals from Sampling Devices

Procedure for Test-Day Practices for Obtaining Milk Samples on Individual Animals

Version March 2023

Network. Guidelines. Certification.

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Change Summary

Date of Change	Nature of Change
November 2022	Creation of new procedure.
July 2023	Approved by General Assembly and published.

1 Test day policy utilizing proper recording practices when obtaining milk samples on individual animals

With the milk samples being analysed for disease & health screening tests, DNA, milk quality indicators along with the routine component test day requirements, it is essential that all milk sample vials used on test day be properly identified with the corresponding animal that it is collected from. In addition to proper mixing and collection of milk samples from ICAR-certified devices, accurate vial identification and chain of data custody is essential.

2 Identification of the sample vial and linkage to animal Identification

The overview procedure of Section 2 – Cattle Milk Recording provides detailed information on identification of the sample vial in 6.2.4. Further, this section describes the various components of linkage of the sample vial to the animal identification.

Vials may be identified according to:

a. Vial placement in the rack
b. Cow or sample ID written on the vials
c. Barcoded vial with printed cow ID
d. Barcoded vial with cow ID registered at the milking
e. RFID vial with cow ID registered at the milking

3 Quality assurance practices related to animal identification

Cow identification in milking parlour systems may be handling in differing manners. Cow identification may be in series at a central point at the entrance to the parlour, in a series at the exit from the parlour, or individual cow identfication at the stall in the parlour. When using central identification systems pre- or post-milking, cross reference checks to actual animal identification at the stall should be implemented to assure correct linkage of sample vial identification and animal identification.

3.1 Examples of proper recording system practices on test day

a. First group of cows entering milking parlor all need to be visually identified and cross-referenced to the electronic ID system; henceforth two stalls are randomly selected to observe on each group to insure proper ID test day procedures - to substantiate verification of visual observation a paper trail or computer notebook protocol would be used to insure accuracy.

b. First group of cows entering milking parlor all need to be visually identified and crossreferenced to the electronic ID system; henceforth every fifth group is visually identified to insure proper ID for test day procedures - to substantiate verification of visual observation a paper trail or computer notebook protocol would be used to insure accuracy.

c. First group of cows entering milking parlor all need to be visually identified and crossreferenced to the electronic ID system; henceforth each first and last animal is visually identified to insure proper ID for test day procedures - to substantiate verification of visual observation a paper trail or computer notebook protocol would be used to insure accuracy.

It is advisable that if there are any misidentified animals, then proper notification needs to be made to the dairy producer as to the problem discovered. The entire test day should be completed using visual identification until the problem is corrected.

3.2 Validation of electronic animal identification

It is advisable the electronic ID system should have built-in validation checks/software to ensure each row has the correct cow sequence or the milk recording organisation implements appropriate checks on the recording day to validate cow ID.

Such validation checks would include but not limited to:

a. "Cross out" check - in the event cow A is "read" by sensor but withdraws her head and is "passed" by another cow B, then when cow A enters after cow B (or other cows), then the sequence of cows needs to be corrected. A periodic cross-check of actual sequence of cows in the parlour stalls compared to entrance series of cow ID should be conducted.

b. "Random Check" - the system can be programmed on recording day so that the electronic system selects a % of units at random on each row for checking – operator must verify cow at the selected units (accept button) and only when all selected units are "accepted" is the row of cows in the parlour allowed to exit.

c. "Narrow Entrance and Exit Funnel" check - as most errors occur at entry-gate to row, it is advisable for parlor installations to have entrance funnel of "one cow length" thereby distancing the jostling activity from sensors. An automatic or periodic cross-check of the cow ID series at the entrance funnel and the exit funnel (post-milking) cow ID series should be completed.

4 Quality assurance practices related to sample vial identification

Each organisation may use differing vial identification methods as determined cooperatively with the milk analysis laboratory(ies).

Organisations should have in place quality assurance practices that validate the sample vial idenfication and the subsequent linkage of sample vial identification to animal identification as desribed in 6.2.4 of the Overview of Section 2 of the ICAR Guidelines.

Milk sample vials without readable identification should be excluded from analyses and/or reporting of results unless individual laboratory protocols for resolution of sample vial identification issues can resolve the sample vial identification.