Assurance of reliability and validation of yield values in milk recording according to immediately previous history of records

Michal Basovnik[1], Iva Dvorakova[2], Oto Hanus[3], Radoslava Jedelska[3], Jaroslav Kopecky[3], Marek Bjelka[1]

[1]Breeding Cooperative Impuls, cooperative, Bohdalec, Czech Republic
[2]Recording company, Bohdalec, Czech Republic
[3]Dairy research institute, Prague, Czech Republic

Milk recording (MR) is an important breeding measure for over 100 years. The MR methods are still being improved in terms of technology and logistics. However, there are still possible sources of error records in the system. These are based on numerous interactions between human work with alive animals in certain technologically variable milk production system. This fact is practically confirmed. Therefore, the general objective is to eliminate the possible impact of this error rate. This material is validation method of milk yield value records in MR procedure. It means a systematic support of milk yield result reliability to ensure the efficiency of genetic improvement work in milked cattle population in Czech Republic in Breeding Cooperative Impuls working area. A practice algorithm for statistical validation of the milk yield record from an electronic flow-meter was designed for the control day of milk recording according to the immediate previous dynamics of the lactation curve. The procedure used for the algorithm design proposal was validated according to the test results of the model data file from the real MR conditions. Algorithm validation works with the principle of Gauss law of normal frequency of data distribution. Percentage of expected error rate and its replacement was 2.99% on average. The results support the milk recording (95.1% of dairy cows included in the CR) with regard to the changing of technical and technological conditions in farms. Method also can document the assurance of milk yield record validation about the MR results for the supervisory authorities.

Keywords: milk recording, daily milk electronic flow-meter records, genetic improvement, validation, supervisory