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Session:

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Title of the presentation: Embracing new streams of dairy data - how good is good enough?

ABSTRACT

With the investment of new technologies for on-farm data measurement and recording, there is an increasing amount of data available from dairy operations. These data include estimates of traditional measures such as milk yield and components, but also provides access to measurements on new traits of interest to herd recording organizations. With the volume of data available, it is logical to find new paths for data movement from on-farm software or manufacturer servers into organization databases. ICAR has supported milk recording organizations and dairy producers in the traditional test-day collection of data with standards and equations that deliver data for daily management decisions and to qualified information for genetic evaluations. Today, the challenge that exists for recording organizations and national databases is balancing the volume of data from new sources with the accuracy of the individual measurements. Further, the speed of data flow has the potential to allow unqualified data to enter databases before issues or concerns are identified. The challenges of veracity, volume and velocity of new streams of data lead to the question 'how good is good enough' for usability by organizations and databases.

In addition to identification of the source, an evaluation of the data quality at a system level is key for determining the usability or suitability. Focus on the automatic identification as well as the automatic recording of measurements is critical, both on-farm and as data moves into central databases. In addition to linkage of animal ID to measurements, considerations on the completeness and consistency of continuous data flow are of merit. Finally, the editing of data points, including estimation of missing observations and the precision of individual measurements are a component of data quality and contribute to the usability of data. A fresh approach on the inclusion of new streams of data is needed. This systems quality approach should embrace the technology of on-farm sensors that generate valuable insights into dairy cattle milk yield, milk composition, conformation, behavior and activity with the goal of inclusion of usable data that is 'good enough' rather than focus on data exclusion based on precision of an individual measurement.

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