Reproductive Case Study Technote: Historical Measurements

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Carmel Clarke, Technical Service Manager, was recently approached by one her sales colleague with a question from a herd that has been on RMS for the last 2 years. The dairy is one of three dairies owned by the same family, all of which have been on RMS for several years. The question arose because the calving interval (CI), a metric regularly monitored, on the other two dairies was lower than the one in question. The customer had made the assumption that since all the dairies have been on RMS and are seeing great results that the CI should be low on all dairies not just two of the three.

Carmel having met the Global Technical Service team in the U.S. only a few months prior, knew she had resources only an email away so she contacted Dr. Cristian Vergara. Vergara and Carmel worked to understand the dairy and the situation to provide the sales colleague and customer with a good reasoning to the higher CI. The most important take-away from this scenario was that everyone should take extreme caution when utilizing historical measurements (calving interval, days to conception, days open, etc.) as key performance indicators as they have extreme lag, only representing historical data. If a farmer evaluates reproduction based on the historical information he probably would be complaining of increased DOPN or CI, in fact by creating more pregnancies than before you were also converting very open cows into pregnant cows; so average DOPN probably increased along with CI. On the other side, it will take a while for this number to go down. When the cow with the highest DOPN becomes pregnant again in a shorter interval, then it will start decreasing this average because one outlier may increase the average greatly. Therefore, the disadvantage of CI and DOPN averages are their huge VARIATION and a big MOMENTUM, without mentioning that these measurements are not including the currently open cows (BIAS) so are not suitable for population evaluations and may look bad when the reproduction is actually improving!

In summary keep looking at PR, HDR and actual number of pregnancies created as main indicators and be aware of the caveats of DOPN and CI averages to be able to defend your great job of improving dairy reproduction, in case some farmers were focused on the historical measurements.

If you have questions on this case study, please contact Dr. Cristian Vergara ([cristian.vergara@genusplc.com](mailto:cristian.vergara@genusplc.com)) or Carmel Clarke ([carmel.clarke@genusplc.com](mailto:carmel.clarke@genusplc.com)).