Improved NAV genetic evaluation of production traits

November 2016
More appropriate handling of data

- TD observations of milk, protein and fat have different variation in AMS compared to CMS
  - Different procedure in milk recording
  - AMS: more variation in fat and protein
    - less samples (content from one sample only)
    - time between milkings vary, effect is difficult to correct
  - AMS: less variation in milk kg
    - Milk kg calculated as an average over time
More appropriate handling of data

- In the updated model variation of TD observations are adjusted by
  - Production time (year – month)
  - Herd
  - Milking system
More appropriate handling of data

- Check for outlier observations
  - observations that are considered to be too high or too low to be correct records
  - typing errors, cow is sick, high SCC
- Data is screened during editing process, check if observation is outlier, done by
  - breed, parity, lactation stage
  - too deviating observations are set as missing
More appropriate handling of data

- Check for outlier observations
- November 2016 ~0.01% of obs were outliers
- Examples of outliers:
  - 99.4 kg of milk in day 313 postpartum
  - Fat % of 8.90% for RDC cow (having earlier fat % around 4)
  - Protein % of 6.40 for HOL cow (having earlier protein % 3.2)
More appropriate handling of data

• Small impact on A.I. Bulls’ production EBVs
• Small impact on majority of the cows
• Correlations over 0.995 between old and new
• Biggest impact on cows having their outlier observations set as missing, especially if
  • Cow has only few observations
  • Small herds
  • Very deviating record that was earlier included