Milk recording in small herds
Croatian case

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General data

- Total 226,000 cows (2008)
- 120,001 recorded cows (53.1%)
- 9,122 recorded herds (Ø 13.3 cows per herd)

Breed structure in recorded herds:
- Simmental (62.6%)
- Holstein (34.9%)
- Brown (2.3%)
- Others (0.2%)
Milk recording development
Milking systems

- Milking in milking buckets (small herds)
  - 93.5 % recorded herds
  - 66.6 % recorded cows
- Milking pipeline (small herds)
  - 2.2 % recorded herds
  - 4.3 % recorded cows
- Milking parlour (large herds)
  - 4.3 % recorded herds
  - 29.1 % recorded cows
Measurement devices in small herds

- Electronic scale
  - 93.5 % recorded herds
  - 66.6 % recorded cows

- Waikato Milk Meter
  - 2.2 % recorded herds
  - 4.3 % recorded cows
Electronic scale & Waikato

- Arrival of control assistant to farm
- Preparation of control assistant for work
Electronic scala

- Preparation of measure equipment
  - setting of a mobile rack for stability and precision of scale measuring
  - weighing of empty jar
  - Tare weight taking of empty jar
  - scale is ready for work
Waikato

- Mk V Milk Meter
- Regularly appliance control (two times per year - control assistant)
- Annual appliance control (ones a year)
- The test procedure – approved by ICAR
Electronic scale & Waikato

- Identification of cows by number of ear tags through PDA
- Check identification in Central database
- Check the status of cow before the implementation of recording
Preparing of bottle for sampling

- preparation of bar code label
- paste of bar code label on the bottle
- verification of preservative (azidiol)
- bottle is ready for sampling
Milk recording

- preparation for milking
- checking the start time
- milking
- placing the milking equipment
- cleaning the milking equipment
- recording milk volumes

Electronic scale & Waikato

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Elektronska vaga

- Milk recording
  - checking the finish time of milking (duration of milking ↔ average flow of milk)
  - preparation for weighing
  - weighing and determining the produced quantity of milk

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Electronic scale

- Milk sample preparation
Waikato Milk Meter

- Correct installation of measuring devices
- Placing of milking devices
- Measuring the quantity of milk
- Sampling of milk
Electronic scale & Waikato

- Enter data
  - data entry on produced amount of milk and reading bar code
  - data sending in Central database

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Electronic scale & Waikato

- Placing of milk recording samples in the case
- Transport of samples to the Central laboratory for the control of milk
Heat stress

- Measuring air temperature in the stable
- Measuring relative humidity in stable
- Temperature – humid index (THI)
Data recording (1)

- Handheld computer to enter data of milk recording
Data recording (2)

- Software for data recording

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Other dairy systems (1)

- **Milking Parlour Types**
  - Tandem
  - Parallel
  - Herringbone
  - Rotary
Other dairy systems (2)

- Robotic Milking
  - 1 Farm, 6 Milking Robots
THANK YOU FOR YOUR ATTENTION!