

TechKISS Topic: In-line Milk Meters

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"We had a significant increase in milk quality after introducing the milk meters, with no real increase in treatment of cows."

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In-line milk meters generate data on milk production and the milking process for every cow at every milking. All meters measure milk yield. Some test biological indicators for mastitis, nutritional or reproductive status.

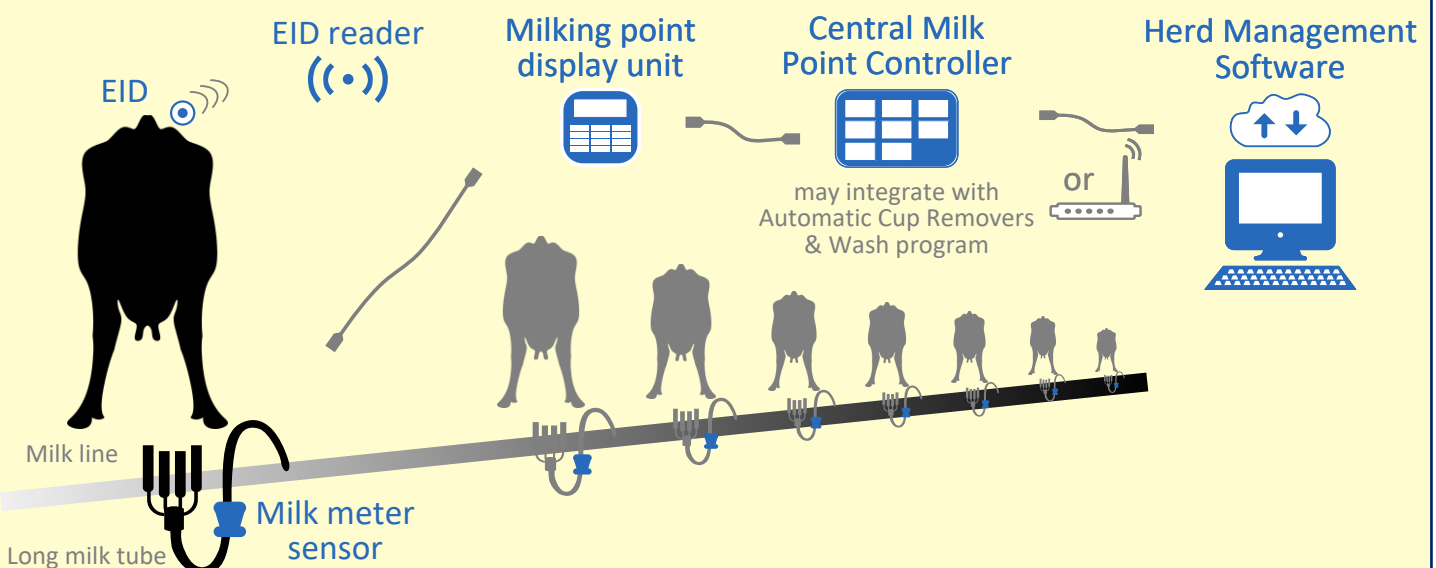
The smart parts of milk metering systems are the:

- **Electronic Identification** that identifies individual cows
- **An EID reader** that matches the cow's EID with a specific milk meter
- **A milking point display** for staff use while milking
- **A central controller** that receives and processes milk meter data
- **Herd Management Software** that compiles data from multiple sources turning it into information.

Benefits

- ★ **Informs drying-off and culling decisions**
- ★ **Helps manage mastitis and milk quality**
- ★ **Tracks responses to changes in feed**
- ★ **Informs feeding regimes so they maintain good cow health and are cost-effective**

The smart parts



Making In-line Milk Meter Equipment Work

Tips & traps from TechKISS study farmers



Choosing milk meters

- Know what it is you want to improve about the herd management
- Talk to farmers and service providers about their experience of systems
 - How they use the outputs
 - How it fits the milk harvesting system
 - How it integrates with other tech
 - Maintenance requirements
 - Any additional skills needed by farm workers
- Talk to your farm advisers (nutritionist, vet etc) on the specific information they need to get value from the system
- Plan for training the farm team to:
 - Become familiar with the equipment and software, then a few weeks later
 - Master all aspects



Fit with your milk harvesting system

- Get meters that are easy to wash /clean
- Be able to get immediate support if milk harvesting is contingent on meters working



Integration with other tech

- Check whether the meter outputs can be used to automate tasks (such as auto-drafting using pre-set criteria)
- Get a system controller that integrates with your herd management software:
 - To inform feeding management (especially if have computerised bail feeding technology)
 - To boost the accuracy of the alerts by combining with other data



Acting on alerts

- Put in place protocols for the different types of alerts (mastitis, health etc)
- Train farm staff, including casuals, so they know what to do



Electronic identification of cows

- Put NLIS tags in the ear on the right
- Prevent electromagnetic interference with the RFID signals:
 - Shield cables
 - Run cabling separate to pumps and other machinery
 - Have adequate earthing
- Regularly check EID of all cows



EID readers

- For milking sheds with EID reader at entry, design lead in so cows stay in the same order they are read
- For rotary sheds with antenna on entry bridge, have a long entry so only one cow is in reading distance at any time
- For rotary shed with reader mounted overhead at platform entry, install it at least one bail towards cups on so the cow is held by the rump rail



Meter maintenance

- Position meters to give easy access for maintenance and calibration
- Have a strong routine to ensure:
 - Regular calibration of meters
 - Water quality (water hardness) is not interfering with cleaning
 - There is sufficient hot water available for cleaning
 - Reagents are being used correctly (where relevant)
- Check the maintenance schedule is being followed
- Check the system after any modifications or repairs

Visit [NSW Department of Primary Industries](#) for:

- [Videos on cow management technologies](#)
- [TechMatrix list of in-line milk meters available in Australia.](#)



In 2018, 26% of dairy farms in NSW had in-line milk meters, half able to measure mastitis indicators.

TechKISS is a New South Wales Dairy Industry Fund project delivered by the Harris Park Group. Project information is generic and is offered on an 'as is' basis with no guarantees of completeness or accuracy. Please seek advice before acting.