

TechKISS Topic: Electronic Identification of Cows

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"I've been using EID for drafting, bail feeding and milk meters for 15 years and am very confident it's picking the right cows."

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Electronic Identification (EID) enables the quick and accurate identification of animals. It is a necessary part of any technology used for individual cow management on dairy farms.

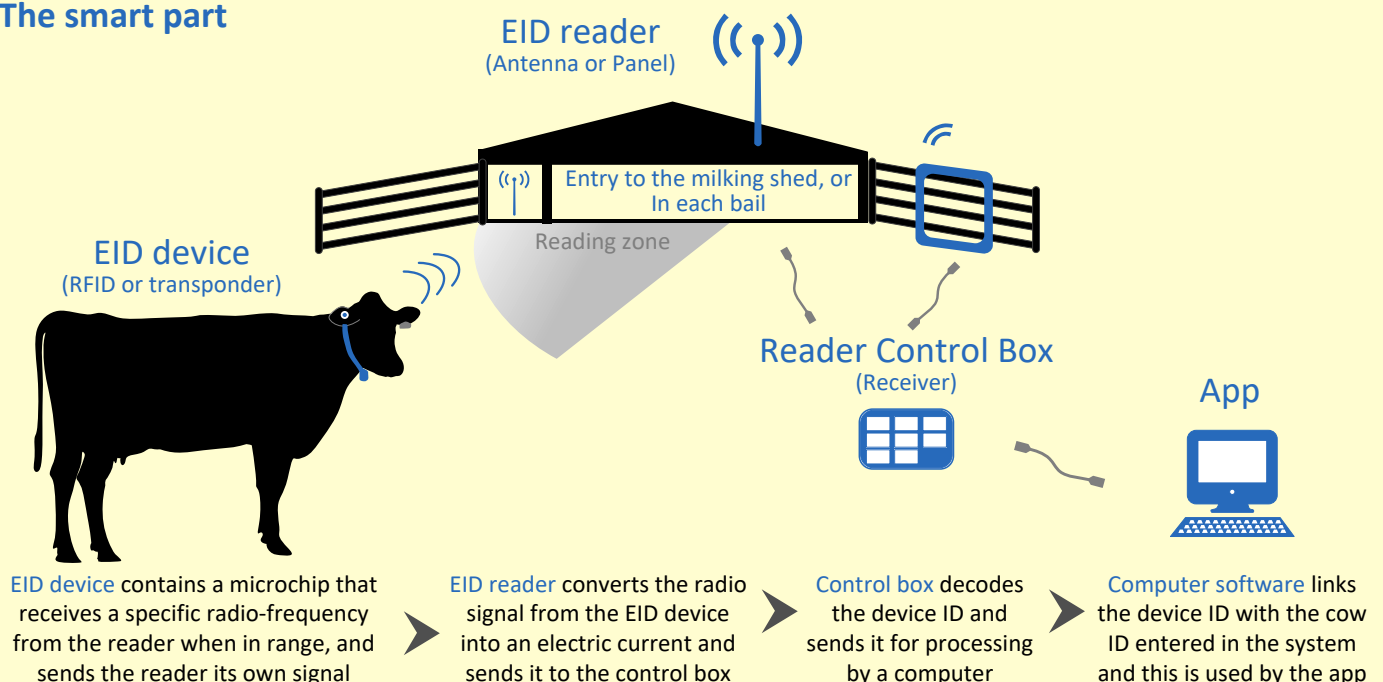
The components of an EID system are:

- An EID device typically an NLIS ear tag, activity meter or proprietary transponder
- An EID reader such as an antenna at the milking shed or in each bail, or a panel reader on a race
- A reader control box (or receiver)
- A computer processor and software (app).

Importance of EID

- ★ Automates cow identification
- ★ Used by all technologies that automate management tasks for individual cows
- ★ Makes customised management of cows practicable in large herds

The smart part



Making Electronic ID Work For Your Farm

Tips & traps from TechKISS study farmers



EID readers

- Tune the antenna to the reader controller
- Protect the antenna from damage by cows (eg with poly pipe)
- For NLIS tags, place reader where tags can be sufficiently energised by antenna before use
- Position readers:
 - So the cows' EIDs are in their zone of detection
 - In rotary dairies, to detect cows that go around the platform twice



Signal interference

- Have a pre-installation site survey to check for potential interference
- Check for electromagnetic interference at installation:
 - Place antenna on wood if possible
 - Ensure Variable Speed Drives and motors have shielded cables
 - Check metal poles, fluorescent lights, electric fences are not causing interference
- If using more than one reader, check for cross-interference (radio frequencies) between systems
- For ultra high frequency devices, check that any water stores aren't absorbing the radio signal



Integration with other tech

- Be satisfied the EID product will work with the other kit on the farm before buying (readers, auto drafting gates, software, etc)
- Have a system that can report 'no reads' and unlinked tags (use a receiver that can transfer data to software that can do this)



Cow identification

- Use visual ID as well as electronic ID
- Put all NLIS tags in the ear on the right
 - Consistency helps keep devices in the 'zone of detection' of readers (eg auto-drafting gates)
 - Avoids tags being adjacent when cows are in bails (eg bail feeding)
- Enter all forms of ID for cows on the computer (correctly matched)
- Have a hand-held reader (wand)
 - They're handy in the yard
 - They're good to have as a back up
- Remember to re-assign activity meters if they are transferred between cows
- Always use a backup to protect against milking errors in the event of a system malfunction, eg paint treated cows



Ongoing oversight

- Regularly check that all cows are wearing EID and the device is working
- For activity meters, check:
 - Batteries are working
 - Devices are sitting right on cows

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

- [Videos on cow management technologies](#)
- [TechMatrix](#) which features common individual cow technologies in Australia.



In 2018, 60% of dairy farms in NSW had cow management technologies that used EID.

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.