Fact sheet

Implementing eID Technologies: Electronic Identification (eID) Equipment

Introduction

The ability to identify and manage individual animals provides the opportunity to significantly improve livestock productivity. The use of eID technology enables producers to read tags of sheep or cattle on their property and record individual production and performance data to improve management practices.

Before investing in eID technology, it is important to set goals for livestock enterprises and determine what information and data is required. Once this has been established, it is then possible to assess how eID technology can assist in collecting this data. Data used in conjunction with a range of farm management or business software packages (such as Microsoft Excel) can be a powerful tool in on-farm decision making and business development/improvement.

eID equipment

Stick/Hand-held readers

Stick/hand-held readers, also referred to as wands, have varying capabilities. These range from basic readers that scan a tag and send information to another device (such as a weigh scale or computer), through to readers that display information about individual animals on its own screen.

Hand-held readers can be a cost-effective way for producers to start collecting individual animal data. They can be integrated with weighing and auto-draft systems to further improve flock/herd management.

Hand-held readers have a read range of between 20 and 40 cm within 360 degrees from the tip of the wand. Combined with the length of the reader itself (up to 60 cm), this allows scanning of animals without getting too close. When using a stick/hand-held reader, users must ensure that the tag is within range before pressing the ‘read’ button.

Most readers are equipped with an audible beeper, light and/or vibration which activate when the tag is successfully read.

Features to consider include:

- screen size

- ability to enter data
- presence/absence of custom fields
- navigation or alpha numeric keypad
- weight of reader.

Suggested products

Gallagher
V2 Hand Held eID Tag Reader and Data Collector
Find out more on the Gallagher website

https://store.am.gallagher.com/am/au/en_AU/animal-management/weighing-and-eid/eid-tag-readers/c/eid-tag-readers

Datamars (formally TruTest)
XRS2 Stick Reader
ERS eID Handheld Reader
Find out more on the Datamars website

https://www.livestock.tru-test.com/en-au/readers/xrs2-stick-reader

Allflex
RS420 Premium Stick Reader Package
Find out more on the Allflex website

https://www.allflex.global/au/

Aleis
9030 RFID reader one-piece handheld
9060 RFIC reader two-piece handheld
Find out more on the Aleis website

https://www.aleis.com/product_cat/producer

Shearwell
SDL400S for use with Stock Recorder, mini printer, Windows & Mac PCs via Bluetooth & Android apps
SDL440S as per SDL400S plus iPhone and iPad apps
Find out more on the Shearwell website

https://www.shearwell.com.au/stick-reader

Panel readers

A panel reader scans eID tags and sends data to another device to be read. Panel readers are normally mounted on drafting races or auto drafters and read tags as the animals pass through. Panel readers are particularly useful when handling large numbers of animals. They can also be integrated within weighing and auto-draft systems to further improve flock/herd management. The type of panel reader required will depend on individual business requirements.

Panel readers have a read range of between 55 and 150 cm within 360 degrees of the panel. Although the read distance can be adjusted, it is important to note that panel readers are multi-directional and cannot be made to read in one direction only. When installing a panel reader, care needs to be taken to ensure the panel will only scan the tag of the desired animal. Most readers are equipped with an audible beeper and/or light which is activated when the tag is successfully read.

For panels to work correctly, they must be properly installed. Panels emit an electronic signal to read the eID tag and mounting on a metal surface may cause an interference and severely impede the accuracy. Advice from the supplier or manufacturer should be sought prior to installing a panel reader.

Many panel readers do not come with data storage capacity and therefore need to be integrated with a scale indicator, computer or tablet to allow storage of information.

Suggested products

Datamars
XRP2 – Complete System
Find out more on the Datamars website

https://www.livestock.tru-test.com/en-au/readers/xrp2-panel-reader

Aleis
9162 and 9162B Automated Race Antenna
6205 Single File Race System
Find out more on the Aleis website

https://www.aleis.com/product_cat/producer/

Shearwell
SDL150 Panel Readers
Find out more on the Shearwell website

https://www.shearwell.com.au/panel-readers-sdl150

Indicators/Scale head

An indicator is a device that may be used to view and/or manipulate data as it is captured from the stick or panel reader. They are used to store and record data quickly. The amount and type of data that can be stored varies with the complexity and price of the indicators (refer to table below).

Collected data is usually downloaded from an indicator using the manufacturers' software programs or, in some cases, downloaded to Microsoft Excel.

Using eID makes the capture of individual animal weights easier and more accurate. Indicators can be coupled with weigh scales and data can be captured against the individual animal's tag number.

Features to consider include:

- number of traits that can be recorded
- number of records
- size of screen and font, easy of data entry, data transfer and software.

Suggested products

Gallagher
TW-3 Weight Scale
TWR-5 Weigh Scale & Reader
Livestock Manager TSi2
Find out more on the Gallagher website

https://store.am.gallagher.com/am/au/en_AU/animal-management/weighing-and-eid/weigh-scales-and-data-collectors/c/weigh-scales-and-data-collectors

Datamars
XR5000 Weigh Indicator
ID5000 Weigh Indicator
Find out more on the Datamars website

https://www.livestock.tru-test.com/en-au/indicators

Te Pari
T30 Scale Indicator or E-Series
Find out more on the Te Pari website

https://www.tepari.com/au/products/animal-management/scale-indicators/

Barcode printers and scanners

Barcode printers and scanners enable a barcode to be produced for each individual animal, based on their eID tag number and then scanned to enter specific data for that individual animal.

An eID stick reader in combination with barcode printers and scanners makes the collection of individual fleece data, such as micron and fleece weight, more efficient and accurate and particularly useful when undertaking measurements of wool traits at shearing, when the fleece is separated from the animal. Capturing individual animal fleece data makes animal selection and culling decisions easier.

Stick/Hand-held readers are used to capture the tag number and sends the data via Bluetooth to the barcode printer, which prints a barcode that corresponds with the eID tag number of the animal. When using the equipment for wool weights, the printed barcode is kept with the fleece, then scanned with a barcode reader and weighed. When linked to an indicator, the data can be automatically entered or manually recorded.

It is important to ensure the printer is coded to work with the stick reader. Some printers will only work with specific stick readers, so check compatibility prior to purchasing. Barcode scanners need to be a 2D scanner to work with Tissue Scanning Units (TSUs) and programmed accordingly.

The barcode printers can also be used when taking wool samples for testing, with the barcode kept with the sample for identification. Comments can also be recorded on the barcode for data entry later or for creating bin lines (e.g. black wool, cull etc.).

Suggested products

Allflex
Bluetooth Docket Printer
Find out more on the Allflex website

https://www.allflex.global/au/product/bluetooth-printer/

Zebra
Bluetooth Printer
Find out more on the Zebra website

https://www.zebra.com/ap/en/products/printers/mobile.html

Shearwell
Mobile Printer for Stick Reader and Stock Recorder
Find out more on the Shearwell website

https://www.shearwell.com.au/mobile-printer

Datalogic
2D USB/Serial Barcode Scanner (EE-300-375)
Find out more on the Datalogic website

https://www.datalogic.com/eng/automatic-data-capture/handheld-scanners-pc-3.html

Software

The other component of successful implementation and adoption of eID technologies is the selection of the correct software. The right software can be a powerful tool for a sheep or beef producer. The ability to capture and store data, then generate subsequent reports, can assist the producer to make more informed decisions and streamline farming operations. Before purchasing, consider the purpose of the software, particularly the type of information captured and its application.

More information

Victoria DPI – EID Readers
http://agriculture.vic.gov.au/agriculture/livestock/national-livestock-identification-system/nlis-sheep-and-goats/eid-readers

eID Software
http://agriculture.vic.gov.au/agriculture/livestock/national-livestock-identification-system/nlis-sheep-and-goats/eid-software

Acknowledgements

Thank you to Michelle Cousins and Hamish Dickson for their contributions and review of the fact sheet.

This fact sheet is an initiative of the Red Meat and Wool Growth Program of Primary Industries and Regions SA, supported by Meat and Livestock Australia, SA Sheep and Cattle Industry Funds and SheepConnect SA.

Contact

Website: pir.sa.gov.au/redmeatandwool
Phone: 1300 364 322
Email: redmeatandwool@sa.gov.au