Contributor

MEAT & LIVESTOCK AUSTRALIA

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Cattle and sheep farming today

Technology on farms

Technology has always been used on farms. Today, you would be amazed at the technology farmers have access to, how they use it to make their jobs safer, more efficient and to help ensure their animals stay healthy and stress free.

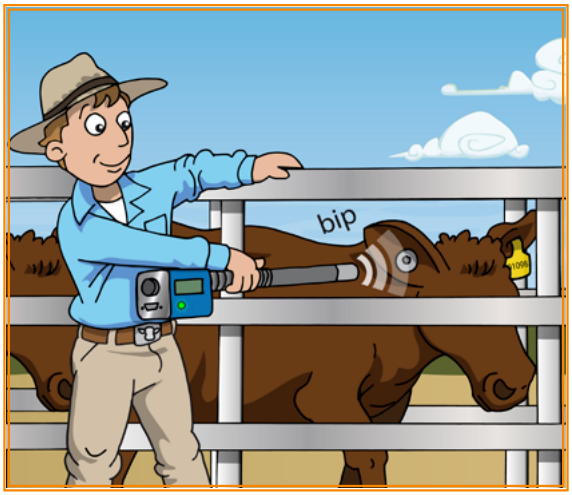
Drones

Drones are new to agriculture, and are quickly becoming a tool for many livestock farmers across Australia. Drones can fly over fences and don't have to stick to easily accessible roads, so they can quickly and easily reach areas of the farm that may take the farmer a lot longer by vehicle. The camera in the drone can feed pictures back to the farmer through a computer or tablet.

Current common uses for drones include:

- checking that animals have clean water through regular checks of dams and other water sources (troughs)
- checking that animals are healthy, in the correct paddock and stress free
- checking that fence lines are not broken
- checking for weeds, pests and feral animals.

National Livestock Identification System (NLIS)



The National Livestock Identification System is a way to gather and store information and data about individual animals. The system has three parts:

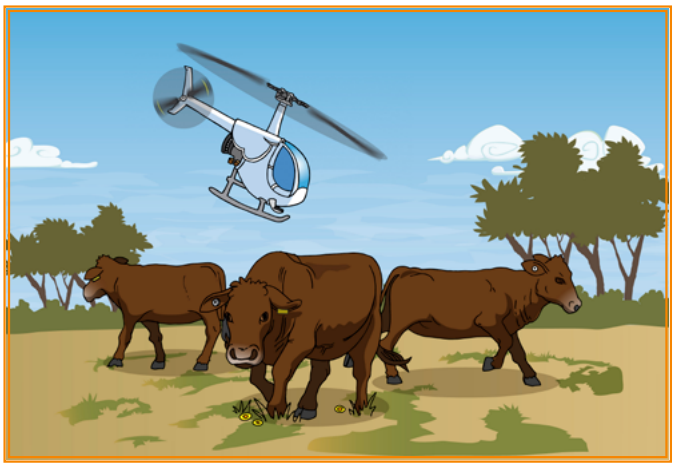
1. An ear tag (attached to the animal) with a unique number for each animal.
2. A Property Identification Code (PIC) that tells you where the animal was raised and is updated if the animal moves through properties, feedlots, sale yards etc.
3. A web-accessible database to store all the information.

As animals are born, bought or sold, they must be tagged with a NLIS tag at their property of origin. Each time the animal moves to a different location this is recorded with that animal's unique code. A farmer can then easily scan the ear tag of each animal and access the history of that animal that has been entered and recorded within the NLIS database.

Australia established NLIS in 1991, and it shows our commitment to biosecurity (controlling diseases and pests to keep our animals healthy and our meat disease-free). This system is recognised around the world and means that Australian red meat is well-respected in other countries because when the system is used correctly, the whole life of an animal can be tracked and accounted for.

Vehicles and machinery

Vehicles and machinery are used on farms to help farmers with a lot of jobs. Helicopters, tractors, motorbikes, irrigation pumps and other machinery make Australian farmers' jobs quicker and easier.



For example:

- Using a helicopter to travel around a large property, or to herd cattle, can be faster than doing the same job on horseback or motorbike.
- Using electric shears is a more efficient way to shear a sheep, not to mention safer for the sheep, than the old-style clippers.
- Using tractors and other heavy machinery to cultivate soil, sow seeds, spray weeds and carry feed is quicker and easier for the farmer.
- Newer machinery technology includes autonomous (self-driving) tractors. Autonomous tractors use satellite technology and are independently programed which means the tractor does not need a farmer to operate the machinery. These tractors are built and programmed to observe their position, decide speed and avoid obstacles such as people, animals or objects in the paddock, while performing specific tasks such as sewing pastures and crops.

Tablets, smartphones and GPS systems

Tablets, smartphones and GPS systems are used on farms for a variety of reasons, for example:

- checking the weather
- recording stock levels and animal health
- use of agriculture farming apps and apps to help soil health and animal feed systems
- GPS devices can help farmers to lay a fence line
- GPS devices are very useful for farmers sowing grass and crops – the GPS installed in their tractor uses satellite mapping to ensure the crop is sowed evenly and cost effectively.
- satellite technology is also used to operate the autonomous tractors. GPS positioning and automation software manages the vehicle's path and controls the farming implements attached to the tractor. An on-board computer receives commands from a remote command station or satellite which then translates the information into vehicle commands such as steering, acceleration, braking, transmission, and implement control.