



Caring for the environment

Like agriculture and all human activity, raising cattle, sheep and goats has an impact on the environment. But for anyone who lives off the land, taking care of the environment is an important part of their day's work. Our livestock farmers work hard to ensure that farming techniques work in partnership with the natural environment to minimise the impact of farming on their land. Here are some areas that farmers consider.

Biodiversity

Biodiversity is the variety of all living things (plants, animals and micro-organisms) and the ecosystems they form. Biodiversity exists in the soil, vegetation supported by the soil, wildlife that accesses the soil, and the general habitat.

Australia's cattle and sheep farms occupy around 50% of agricultural land used in Australia and this can have an impact on biodiversity. These range from the direct impact of land clearing and overgrazing to the introduction of weeds and changes in water flow and soil.



However, farmers are doing lots of things to protect their land and encourage biodiversity on their properties. These include:

- research to gain an understanding of biodiversity and find out more about sustainable land management practices
- dedicating areas of their property to revegetation and fencing these areas so livestock and feral animals cannot access them
- planting tree belts to provide shelter for stock and native fauna
- planting or encouraging growth of natural vegetation
- fencing off waterways to help manage erosion and conserve natural waterways
- working with other farmers, or land-care organisations to share ideas and support each other.

Soil and vegetation

Healthy soil is essential to the sustainability of cattle and sheep production. Good soil creates environmental benefits through better capture of water and nutrients. This means that the crops grown for grazing are better quality, so animals have more nutritious food to eat.

Some common ways to improve the health of soil are:

- adjusting the number of animals that graze in an area
- regular soil testing to check soil health and nutrient levels
- introducing plant varieties or soil fertiliser to improve soil health
- resting grazing land – this means closing paddocks so animals cannot graze there for a period of time. This allows the pasture to regenerate, improves the soil health and promotes biodiversity.

Although in the past some agricultural land was cleared, today farmers understand the importance of balancing plants, trees, animals, and insect and bird life with agricultural farming.

A healthy ecosystem helps keep soils, grass and trees healthy, while keeping weeds away. Trees and plants provide a home, shade and food for animals, birds and insects, and also help to stop soil erosion. Without trees and plants, the soil has nothing to hold it together and is in danger of washing away when it rains.



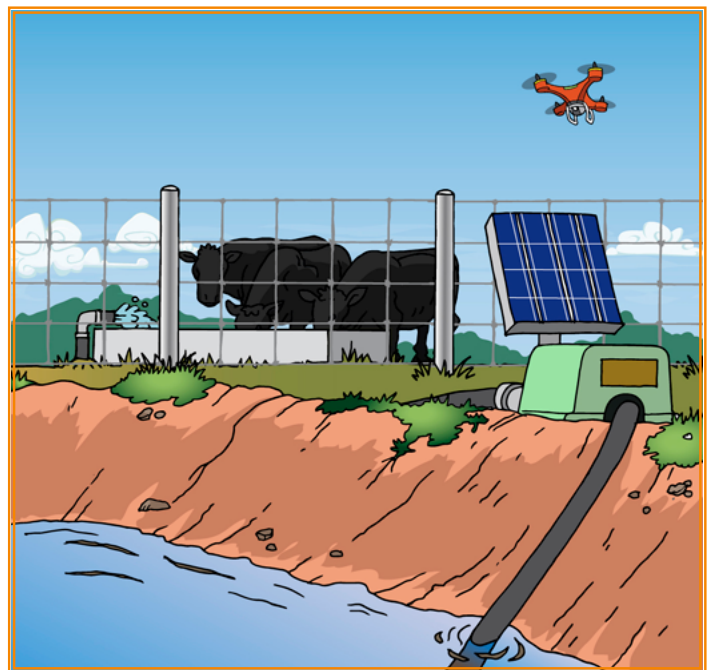
Water

Water is critical in cattle and sheep farming as it is essential for animal and pasture health. Farmers know that it is a precious resource that needs to be conserved.

Water is required in paddocks, feedlots and processing plants. Did you know that it takes between 103 and 540 litres of water to produce one kilogram of red meat? This sounds like a lot, but the amount has been reduced by 65% over the last 30 years (it used to be about 1,465 litres per kilo).

On the farm, water is mainly used for animal drinking water, and the red meat industry is always looking for ways to lower water loss. One way farmers are doing this is having 'water points' on their properties.

Water points are places where the animals can go to drink that may not be a natural watercourse (like a river or dam). It is important that water points are checked regularly (even daily) to make sure they are clean and there is enough water for the animals. This would take a long time if the farmer had to visit each one on a large property, so they use something called 'telemetry technology'. This sends information about the water point to the farmer including how much water is available for the animal or how clean the point is.



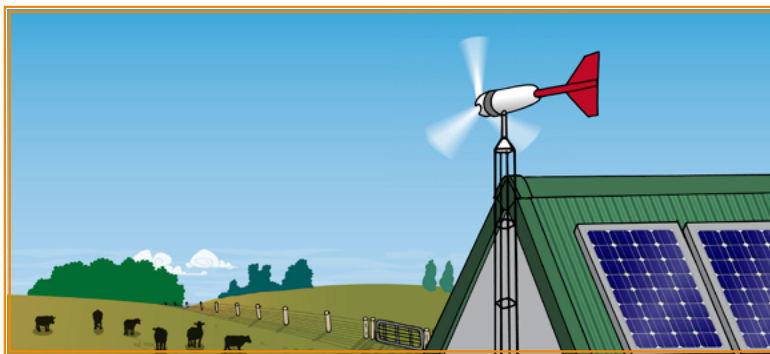
Then the farmer knows if the point needs to be visited and attended to. Some telemetry technology even allows the farmer to fill the water point without leaving home. It can also tell a farmer if there is a leak in a pipe and this can be fixed quickly so water is not wasted.

According to the Australian Bureau of Statistics, the total water used on Australian farms decreased by 3.5% in 2015-16. This figure includes water for a range of farming uses (not just meat and livestock), but it shows that our farmers are taking the issue of water conservation very seriously.

Energy

Red meat production requires quite a bit of energy. While most energy used within the red meat industry is used in the processing of the meat, some energy is needed on farms and in feedlots.

Most of the energy used on the farm is to power the homestead (like we need power for our homes). Farmers also need energy to pump water and fuel to run machinery. This is mainly still in the form of electricity from the local grid, but more farmers are harnessing the power of the sun and the wind to meet their energy needs.



Here's how:

- Windmills have been used on farms for over a hundred years and are still used today to generate power from the wind.
- More farmers are investing in solar panels as a power source to pump water, power their homes and process grain or feed: they can even sell excess power back to the grid for others to use. The wide open spaces in rural areas makes farms an ideal place for solar technology.
- Some feedlots are even extracting energy from manure!

Emissions

Australia's red meat industry produces only about 10% of Australia's total greenhouse gas emissions. Most of these emissions come from methane which is produced by the natural digestion process of cattle, sheep and goats.

Cattle, sheep and goats belong to a group of animals known as ruminants. Ruminants have a digestive system that allows them to eat otherwise indigestible foods, such as grass, by regurgitating it as 'cud' and re-chewing it. To help digestion, ruminants' stomachs are filled with bacteria that break down the cud, producing methane in the process. So when the animals burp, methane is released into the environment.

Farmers are always looking for ways to reduce this methane production, including adjusting the animals' diet so that they are eating feed that is digested more easily.