Produce It. Protect It.

## Technology in Agriculture Over Time







## Hand Plough (Hoe)

Technology that is used to lift the soil and break it into smaller pieces. This makes seeds germinate more easily and also puts air into the soil. It is a slow process that can take a long time.



## Horse Drawn Plough

This technology replaced hand ploughs in large paddocks. It also makes seeds germinate more easily and aerates the soil. This gets the job done more quickly for the farmer.



Hand shears look like scissors and allowed the shearer to remove wool close to the skin of the sheep and in one piece. Using hand shears was hard work, slow and a bit dangerous.

## Hand Shears

## Cattle Yards

Used to hold a group of cattle so that the farmer can get close to them and give them vaccinations, ear tags and check their health. Yards make it safer for the farmer to go near the animals and also speed up working with a big group of cows.





## Mechanical Shears

Mechanical shears are electric and glide near the surface of the sheep's skin to cut the wool off. This technology replaced hand shears. They are safer for the sheep and farmer, easier to use, and much faster so the farmer can shear a lot more sheep in one day.



## Header

Headers are used to cut the right part of the plant (crop) off and leave behind most of the plant. They cut very quickly compared to hand cutting so the job gets done faster. They also measure the amount of crop that is being cut, which is valuable information for farmers.



### Drone

Drones are used to collect accurate information around the farm, such as how crops are growing, if they are ready to harvest and if there are any pest problems to address.

## Spraying Robot

Used to monitor the growth of produce and provide accurate information to farmers about the needs of the plants on their farm. These robots use sensors to monitor how the plants are growing and automatically spray them with water, pesticide or fertiliser as needed. This saves money and time for the farmer when producing their crops.





### Ear Tag

Ear tags are used to help farmers tell their stock apart, so that they can look after them properly. The tags help to track the year the sheep or cow was born, which vaccinations they have had, and which farm the stock has come from if sold. This allows the farmer to collect information about their animals.



## Traditional Rain Gauge

Traditional rain gauges are used by farmers to measure the amount of rainfall. Farmers check their gauge at the same time each day and record the amount of rain that has fallen. This helps Farmers make informed decisions about when to plant, spray and harvest crops.



### Automatic Rain Gauge

Used to monitor and accurately record the weather, including the amount of rainfall and humidity. These gauges have special sensors that make their measurements very accurate. They have Bluetooth connectivity that sends all of this data to farmers' phones or computers to help them make informed decisions about planting and harvest.



## CATEGORY 1: Makes farm work safer.









## CATEGORY 2: Makes farm work easier/more efficient.















# CATEGORY 3: Solves a problem in agriculture (eg. pests eating crops).















## CATEGORY 4: Helps farmers collect data and information.









