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1) research is needed when developing agricultural technologies to ensure that it is worth farmers investing money into the products that will assist them in everyday ^{farmers} life. That improvements can be made if needed and to further enhance experiments.

In many cases an experiment can be already tried by doing research a scientist can find out their results to complement or differ from his so that more things can be tried and tested. Research provides background information on a agricultural technology that would assist later when marketing the product to the public such as who would benefit from using such technology, why would they use it, how it is beneficial and whether it is needed in the agricultural sector.

II) There are many reasons why newly developed agricultural technologies are widely adopted, for example the costs of the technology may outweigh benefits. The Robotic dairy is a newly developed piece of technology that has not been widely adopted in Australia with many farmers sceptical of the results that were gained from the trials studies and the reliability of the system as well as the costs when put into consideration with traditional milking ways. The Remote Drafting System which is being trialled by the Sheep Industry Cooperative Research Centre in Western Central Queensland may not be widely adopted as for some family farms and/or hobby farms which do not have extremely large flocks of sheep, the need to control or track individual sheep may not be extremely difficult therefore there is no need for such technology. Reasons → cost, need for technology new technology may be deemed

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unreliable compared to traditional
ways, and questionable statistics
and results.

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There are many recent developments in computer related technology that are used to monitor and manage factors associated with agricultural production that benefit people working in or surrounding ^{the} agricultural sector. such as the:

- National Livestock Identification Scheme.
- Breedplan
- GPS tractors.
- Remote Drafting System

The National Livestock Identification Scheme (NLIS) is an Australian scheme which monitors where sheep and cattle are moved from. All animals must be tagged from birth with their movements from different properties recorded ^{and monitored} until their eventual death or slaughter.

This scheme is beneficial as it allows the government and P.I Department to quickly act in the event of a food safety or disease issue, with the sheep in question to be able

to be tracked from properties it has been in its life, this allows the government to quarantine the area or farm quickly stopping the spread of diseases, which can have a large and harmful impact on the agricultural production all across Australia.

~~The use of~~ Breedplan is a breeding system which allows the data of cattle to be entered into the system with data entered about weight, carcass size, yield of milk, as well as information about the questioned cows relatives or offspring. Breedplan allows farmers to view desirable traits with the cows used to add their genetic material onto offspring with their traits. This development in computer related technology allows for farmers to view the genetics of cows and bulls to ~~the~~ produce offspring that are more profitable than those of previous generations. This greatly

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benefits agricultural production as cattle both for meat and milk is one of the biggest exports Australia does and plays an important role in ^{the} Australian economy.

Another computer related technology is the use of GPS tractors which are controlled and tracked by the computer and GPS system, this is beneficial ~~as it is~~ to farmers who have large amounts of land as it frees up time allowing them to spend time doing other farm activities or leisurely.

Recently the Sheep Industry Cooperative Research in Western Central ^{and} Australia began to experiment with remote drafting systems which allowed farmers to control individual sheep in the flock through radio frequency identification (ear tags) and with water points being fenced off with one flow gate for entry. This gate and ID tagging

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allows for separation of flock into factors such as age, weight, gender, whether sheep have tags or not. However the Research center was experimenting with remote drafting and the supplementation of feed for animals that needed it. Due to the ability to separate the flock only sheep that needed the feed was able to get it therefore being economically efficient in times when farmers are struggling.

The benefits of these ^{computer-related} technologies include

- the ability to trace animals therefore disease
- genetically enhance future offspring by viewing genetically desirable characteristics
- frees up farmers time for other activities
- economically efficient.

However many benefits these recent developments in computer related technology are that benefit agricultural production they can involve.

- high start up costs.
- may be impractical on small family farms (remote drafting systems)
- involve membership fees (Breedplan)
- And some must be obeyed due to government law (NLIS).

many farmers may believe that these recent developments in ^{computer} related technologies may be beneficial to agricultural production other farmers may not with factors coming down to.

- farm size
- ~~econom~~ financial considerations

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