



Learning Activities

1. Discuss the technologies used on a range of farms e.g. dairy, arable, poultry, horticulture, beef and sheep. Give a short 3 minute presentation on one technology adopted, and the key benefits.
2. Produce a leaflet on one of the listed technologies explaining how it might be used on a farm and the benefits to the farmer



Web Resources/Links

For an introductory session, the following 2 websites will be of use:

www.youtube.com/watch?v=7r7WiEG40Mw - robotic milking video clip

http://en.wikipedia.org/wiki/Automatic_milking - facts and figures for robotic milking

For technology examples relating to specific farm types, some examples are given below:

www.dardni.gov.uk/ruralni/index/ruralni_news-current/ruralni_news-current-2/aphis_online_training_.htm

- use of APHIS on line recording system to maintain farm animal records efficiently

www.fwi.co.uk/Articles/10/09/2012/135085/Beef-farmers-could-profit-from-use-of-technology.htm

- beef farm using electronic weigh scales

www.fwi.co.uk/Articles/04/10/2012/135504/2012

- Dairy-Farmer-of-the-Year-Thomas-Steele.htm
- dairy example: during milking, conductivity of milk is assessed to allow early detection of E coli and mastitis cases in particular cows.



GCSE

FACT FILE

Agriculture and Land Use

Unit 2: Technology and the Agriculture Industry

For first teaching from September 2013

For first award in Summer 2015



agri
and culture
land use



FACT FILE

Unit 2: Technology and the Agriculture Industry

agri culture and land use



Learning Outcomes

Students should be able to:

- Describe how technology, such as electronic ID collars/tags, computer-based record programs, pedometers for heat detection and Animal and Public Health Information System (APHIS), has been adopted by the agricultural industry and explain the benefits to farm businesses.

USING ICT APPLICATIONS ON THE FARM



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Key Terms

technology adoption
labour efficiency
financial savings

INFORMATION

Farm businesses adopt existing and new technologies as they become known and where farmers can realise benefits for their business. Technology can sometimes be slow to be taken up simply due to availability, lack of advertising, costs, and fear of the unknown. Key benefits are often related to financial savings and time/labour efficiency, but some technologies lead to environmental and safety benefits for the farmer and the farm business.

For a general overview of future farm technologies use the article below:
www.fwi.co.uk/Articles/15/02/2011/125506/What39s-the-future-for-farming-technology.htm

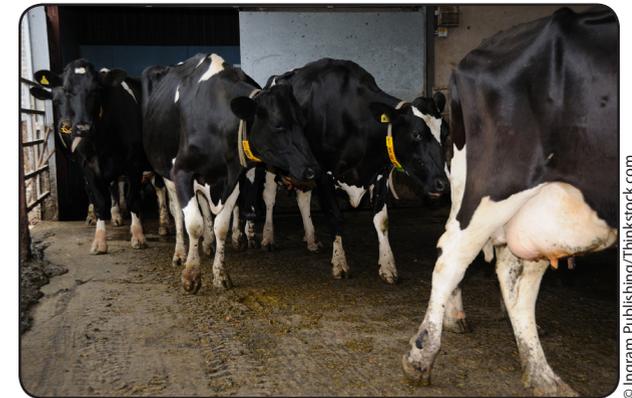
Specific examples of technologies related to certain farm types are listed below.

1. Electronic ID tags

An ear tag is attached to each cow. When the cow passes an antenna at the entrance to the parlour or in a robotic drafting crate the ear tag sends a signal to the reader, which passes this message to a computer, which identifies the cow. This identification may be used to control feeding, voice messaging, sorting cows into pens etc.

2. Pedometers for heat detection

The pedometer is fitted either to the neck or the leg of the cow and enables them to be monitored 24 hours a day. The device records how far, how often and how fast the cow is moving around and sends regular updates to a computer. It shows if there's a 'spike' in their activity, which indicates that they need to be inseminated, either artificially or by a bull.



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3. Animal and Public Health Information System (APHIS)

APHIS is a free system provided by DARD. It allows farmers to record details of their herd online, such as deaths, births, movements etc. This information is accurately stored so that it can be retrieved by the farmer at any time.