University researchers promote new animal recognition technology

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Two entrepreneurial researchers from The University of Queensland and the University of Southern Queensland, have taken their collaborative research further along the commercialisation pathway with their appearance tonight on the ABC's The New Inventors program.

Neal Finch (UQ) and Mark Dunn (USQ) have developed a novel animal recognition technology which uses solar panels, a mini computer and a webcam to separate cattle and sheep from feral animals and wildlife.

The patented technology will enable producers to ensure their livestock get the water and feed they need while reducing the grazing pressure on already drought-ravaged livestock properties.

The researchers have used Machine Vision Technology (MVT) to identify animals and control their movements through automated gates to access watering or feed points. It can distinguish between sheep, goats, cattle, horses, pigs, kangaroos and emus and has application for other species and uses.

In their pitch to the judging panel the researchers highlighted their innovation's unique benefits.

"The small, energy efficient hardware running the animal recognition software can also read Radio Frequency Identification (RFID), which means individual tagged animals can be recognised," said Neal Finch.

"Combining this technology with the ability to enclose a watering point and operate an automated gate provides an opportunity to manage large areas of the Australian rangelands in a revolutionary new way.

"If large enough areas have water access managed, then issues such as Total Grazing Pressure and feral animal control can be addressed without traditional culling methods like shooting or poisoning."

Dr Peter Murray from UQ's School of Animal Studies, who has been supervising the four-year research project, believes one of the key commercial advantages of the technology is its potential to augment many of the tasks currently undertaken manually, representing a significant saving in labour costs.

"The system can be used to control the loss of feed and water to feral animals and increase farmers' productivity and efficiency in remote areas. It can be applied to a range of Australian conditions as well as overseas situations, such as large game reserves and national parks," Dr Murray said.

The Federal Government has provided more than $600,000 from the Natural Heritage Trust to support the development and trial phases of the project. UniQuest, UQ's main technology transfer company is commercialising the technology.

UniQuest's Managing Director, David Henderson, said the promotion of the animal recognition technology on a program such as The New Inventors could generate significant interest for these new systems.

"Innovations like this technology are addressing very real problems. Some studies have estimated the costs to the pastoral industry caused by feral pigs and goats to be more than $300 million. Lamb losses can be as high as 30% each year," Mr Henderson said.

"Negotiating investment and licensing contracts for university-based research helps to advance the product development and get it onto the market for end users much sooner."

Rural Pacific Marketing (RPM), one of Australia's leading manufacturers and suppliers of livestock and rural equipment, is looking forward to commercialising the technology.

"With labour and diesel costs continuing to escalate, primary producers are trying to do more on their properties themselves as well as reduce their travel around their often extensive properties. This technology enables producers to do both," said David Lynch, RPM CEO.

Source: The University of Queensland

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